A Critical Evaluation of Space Requirements of Existing Industrial Estates in İzmir

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ABSTRACT

The main objective of this thesis is to examine and evaluate the industrial estates including 20 in total which have been established are currently being established.In addition the manufacturing industry will be wxamined and evaluated in relation to the progression of in critical industrial estates.İzmir contains the highest number of in Turkey ,hence a detailed evaluation will be made from a critical point of view on the required amount of space for the industrial estate in.Furthermore the policies of industrial estates in Turkey will be a critical aspect of the study.

The main objectives of policies of 40 years include; reducing unbalance between regions, controling and directing industrial development, reducing unemployment and using industrial estates as a urban organizer.In this study, practiced policies of industrial estate with policies in development plans explained above and how much of these policies has been fulfilled will be discussed.In addition, the questions of which industrial estates have been successful and unsuccessful and the effective factors will be explained.

In the case study, structure and historical development of manufacturing industry in İzmir were examined.The objectives of industrial estates to become widespread through the city, what actors have influenced policies of industrial estates and the goals of these actors on establishing industrial estates have been discussed.For this reason, establishment objectives and technical features of industrial estates that were active, on the process of construction and on site analysis stage were also examined. Afterwards, by Regression , Arima-Moving average and Exponential Smoothing-Holt Models expectation of manufacturing industries of İzmir and required space presuming establishments of manufacturing industries and their choice of places in industrial estates were estimated.

With this objective first of all; practicing of industrial estates from some choosen countries, economical advantages of the industrial estates and the importance and allocation of industrial estates in urban and region planning were discussed.Second of all; some information was outlined in the development, judicial bases, establishment , location selection, administration and financing of industrial estates in Turkey. Third of

all; the critical evaluation of practicing industrial estates in Turket and its results were done.
Finally, analysing manufacturing industry of İzmir, space requirement of industrial estate in 2020 was estimated and some policies were proposed regarding the exist ance of industrial estates to avoid creating idle capacity.

Key words: Industrial estate, industrialization, industry planning and manufacturing industry.

ÖZ

Bu tezin temel amacı kurulmuş ve kurulmakta olan toplam 20 organize sanayi bölgesi (OSB) ile Türkiye'de en çok organize sanayi bölgesine sahip İzmir'in imalat sanayi yapısını inceleyerek, 2020 yılı OSB mekan gereksinimini tahmin etmek ve mevcut OSB mekan gereksiniminin eleştirel bir değerlendirmesini yapmaktır. Tezin amacına yönelik olarak Türkiye'nin organize sanayi bölgesi politikası değerlendirilmiştir.

Planlı kalkınma dönemi ile birlikte uygulanmaya başlayan 40 yıllık OSB politikasının temel amaçları; bölgeler arası dengesizliği azaltmak, endüstriyel gelişmeyi kontrol etmek ve yönetmek, işsizliği azaltmak, sanayi bölgelerini kent düzenleyicisi olarak kullanmaktır.Bu çalışmada uygulanan OSB politikası ile yukarıda açıklanan kalkınma planlarındaki OSB politikalarının ne ölçüde gerçekleştirildiği tartışılmış ,hangi OSB' lerin başarılı ve başarısız olduğu, ve bu konudaki etkili faktörlerin neler olduğu açıklanmaya çalışılmıştır.

Alan çalışmasında, İzmir ili imalat sanayi yapısı ve tarihsel gelişimi incelenmiştir. OSB'lerin il genelinde yaygınlaştırılmasındaki hedeflerin neler olduğu, OSB politikasında hangi aktörlerin etkili olduğu ve bu aktörlerin OSB kurulmasındaki amaçlarının neler olduğu tartışılmıştır. Bu amaçla faaliyet,inşa ve etüt aşamasındaki OSB'lerin kuruluş amaçları ve teknik özellikleri incelenmiştir.Bundan sonra kurulacak imalat sanayi tesislerinin OSB'lerde yer seçeceği varsayılarak 2020 yılı İzmir ili imalat sanayindeki büyüme ve OSB alanı gereksinimi Regression , Arima-Moving average ve Exponential Smoothing-Holt Modelleri, kullanılarak tahmin edilmeye çalışılmıştır.

Bu amaçla ilk olarak, seçilmiş bazı ülkelerin OSB'leri ,uygulamaları, OSB'lerin ekonomik avantajları ve OSB'lerin kent ve bölge planlama içindeki yeri ve önemi tartışılmıştır.İkinci olarak, Türkiye'de OSB uygulamasının gelişimine ,OSB'lerin hukuki dayanaklarına, kuruluşuna, yer seçimine, yönetimine ve finansmanına dair bilgiler aktarılmıştır.Üçüncü olarak, Türkiye OSB uygulamasının ve sonuçlarının İzmir imalat sanayi analiz edilerek, 2020 yılı OSB alan gereksinimi tahmin edilmeye çalışılmış ve İzmir'deki mevcut OSB'lerin atıl kapasite yaratmamasına yönelik politikalar önerilmiştir.

Anahtar Kelimeler: Organize sanayi bölgesi, sanayileşme, sanayi planlaması ve imalat sanayi.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF GRAPHICS

LIST OF TABLES

Chapter 1

INTRODUCTION

The main objective of establishments invested is to make profit. In order to make a maximum profit establishment and manufacturing costs should be minimized. The two costs are related directly to location selection of the establishment.With location selection of establishment, factors such as market, raw material, workforce, transportation facilities are effective as well as infrastructure facilities such as electricity, water, sewer system, and shared treatment plant.

Establishments find almost everything they need in industrial estates, particularly infrastructure facilities. First establishment investment does not cost a lot since they pay very little costs for the infrastructure costs when they are first established, and the rest is extended to 10-15 years. Therefore industrial estates are advantageous places particularly for small and medium scale establishments.

When necessary analysis are done, plans are made and directed during the location selection of industrial estates, great economic advantages and encouragements are provided for entrepreneurs. And firms existing in industrial estates benefit from external and agglomeration economies so their competition power increase. A great deal of problems that can not be solved by entrepreneurs themselves are solved by managment of industrial estates. Making use of agglomeration economies, establishments decrease costs of investment. Hence, better manufacturing facilities for small and medium scale establishments were provided in order to achive planned and programmed settlement of these establishments.

In addition to being an effective means of practicing macro policies, the policy of industrial estates, is accepted as a considerable way of industrialization by improving industry, modernizing industry establishments according to increasing productivity and profit, decreasing costs and improving quality of products.

Industrial estates that are effective on organizing relations of urbanization and industrialization, control negative effects of industry units on environment and provide them for easier and cheaper production where industry units are as a whole.

For a long time, Turkish industrialists with insufficient economical and technical possibilities could not obtain enough capital accumulation in order to establish a firm. Besides facing a lot of problems such as finding a convenient location for establishment, establishing infrastructure, constructing factory buildings, obtaining machine and equipments, having quality and enough personnel, and having necessary managing capital, they did not have opportunities to put forward their enterprise power.

In the beginning of 1960s in Turkey, practicing of industrial estates started at the same period of the transation to planned development term,which were improving and encouraging Turkish industries connected to plan and programs. Macro policies and expected benefits regarding industrial estates are stated in development plans. Up to now, in development plans industrial estates have been seen as a means of;

-Reducing imbalance among the regions
-Controlling and directing industrial development
-Reducing unemployment
-Using industrial estates as an urban organizer.

However, in practice there has not been a need of policies and plans in order to adopt macro policies of industrial estates. In contrast,this approach of ‘at least an industrial estate for every province’ there has not been a fuss and selective approach and fussiness for location selection. In accordance with objectives of their establishments, industrial estates are organizations that should reflect ‘demand’ factor. Whatever objectives industrial estates have, they should be established in places where local capital is high and demand for improving industry is sufficient.

In Turkey, decision of location selection and establishing of industrial estates is determined by local administration and the influence of the chamber of industry and commerce on politicians, considering completed industrial estates obtain more demand; instead of supply-demand factor and industrial estates policies.

Almost in every district of developed provinces, in city centers of normal and undeveloped provinces at least one industrial estate was established or decided to become established in the future. This kind of diffused practice is against the objectives of establishing industrial estates. Consequently, for estates not having enough capital accumulation and demand, creating idle capacity is inevitable.

The main objectives of policies of 40 years include; reducing unbalance between regions, controling and directing industrial development, reducing unemployment and using industrial estates as a urban organizer.In this study, practiced policies of industrial estate with policies in development plans explained above and how much of these policies has been fulfilled will be discussed.In addition, the questions of which industrial estates have been successful and unsuccessful and the effective factors will be explained.

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In the second chapter, under the title of **'**practices and concept of industrial estates in the world', the description of industrial estates and practicing of industrial estates in the world were desribed as well as main objectives and economic advantages of industrial estates.

In the third chapter, under the title of 'practicing of industrial estates', the development of practicing judicial bases, establishment, location selection, administration, and financing of industrial estates in Turkey are represented.

In the fourth chapter, under the title of 'evaluation of industrial estate policy in Turkey', with general evaluation of industrial estates in Turkey, the assistance of industrial estates to industrialization and urbanization process was discussed. Afterwards, comparasion was made with the practice of industrial estaes in Turkey to those in the western countries.

In the fifth chapter, under the title of 'case study' , the development of manufacturing industry and its importance and allocation in the economy of Turkey, development of manufacturing industry of İzmir with respect to sectors, examining technical features of industrial estates in İzmir and studies related to space requirement of industrial estate in 2020 are noted.

In the last chapter, under the title of 'conclusion', doing a general evaluation, conclusions were drawn and policies were proposed on creating idle capacity in present industrial estates.

Studies of industrial estates done so far can be examined in two groups regarding objectives, extension of the study and the foundations and assosiations which have conducted or are conducting. The first study was done by State Planning Organization (DPT), Chambers and Stock Exchanges Union of Turkey (TOBB), the Ministry of Chamber of Commerce and Industry and United Nations (UNIDO). The objectives of these studies in general are to determine and improve the definition, types of industrial estates, organization of administration, enterprise and finance, use and objectives of establishment, principle of location and implementation plan of industrial estates. In other words these organizations are trying to improve the expantion and solve the problems faced in present industrial estates.

Since industrial estates were not governed by a law until 2000, the ministry of chamber of industry and commerce published a book prepared by State Planning Organization in 1994 about location selection, establishment and managing of industrial estates and principles of preparing an implementation plan. The practicing of industrial estates between 1994-2000 was done according to principles in the study. Since State Planning Organization attached importance to industrial estates in fifth five-year development plan in 1974, in that period it prepared industrial estate specialization committee report. In this study the role of industrial estates on industrialization was mentioned and their role on removing imbalance between regions was emphasized. Another study done by State Planning Organization is 'Industrial Estates in Turkey (1961-1981)' written by Asuman Cezik and Ayda Eraydın. In this study the evaluation of a 20-year practicing of industrial estates with the creation of proposals to overcome the problems which they had encountered. State Planning Organization made a significant amount of studies on evaluation of practicing of present industrial estates during 40-year practicing.

Chambers and Stock Exchanges Union of Turkey (TOBB) and United Nations (UN) made an effort to expand industrial estates to be expanded and for this objective they made studies on presentations, advantages and critical evaluations of present practicing

of industrial estates with defining problems and giving solutions these studies were published.

The second group of studies about industrial estates arethe thesis done at universities. Since the extension of industrial estates is so wide, they attracted some departmants such as administrating, environment engineering, public administration and city and region planning. In administrating department managing and financing of industrial estates, in public administration organization of administration of industrial estates, in environment engineering advantages of industrial estates on protecting environment, in city and region planning as a means of urbanization industrial estates were studied. Recently, in the department of city and region planning two important complementary thesises were done. One of them was done in 1994 by Salim Küçük as a master thesis titled 'Industrial Estates as a Means of Urbanization Policies' at University of İstanbul in the department of city and region planning. The other study was done by Osman Balaban as a master thesis at Middle East Technical University in the department of city and region planning titled 'Critical Evaluation of Organized Industrial Estates as an Urban Policy in Turkey'. In this study the evaluation of present practices of industrial estates was complited and the factors on success and failure of industrial estates were tried to be measured and in conclusion a new and dynamic policy was accomplished.

Methodology of The Study

The methodology of the study includes three phases.The first one is to make a literature survey of recent studies about this subject around the world and across Turkey.

The second one is to do critical evaluation of the practices of the present industrial estates. For this reason, some quantitive datas related to completed industrial estates, ndustrial estates on construction stage and on site analysis stage were obtained from The Ministry of Industry and Commerce.

The third one is to make a case study.In order to estimate space requirement of industrial estate in İzmir in 2020 a four-stage study was done. First; using employment data of manufacturing industry between 1980-1999, employment according to sectors in manufacturing industry of 2003 and 2020, predicted with Regression models

(Linear, Exponential, S-Curve, Cubic, İnverse etc which will be determined by looking at R square.), Arima-Moving Average and Exponential Smoothing-Holt models.And taking out 2020 employment completed with projections from employment of 2003, the increase was calculated. Second, according to sectors of firms that are manufacturing in the present industrial estates, mean plot size for each employee was calculated. Third, multiplying predicted employment increase with mean plot size for each employee according to sectors of firms that are manufacturing in the present industrial estates required industry plot of land in total was found. Fourth, the mean of rate of industry plots in the present completed industrial estates to rate of industrial estate land was used in order to calculate total industrial estate land from total industry plots of land,. Calculating the mean with total size of industry plots, space requirement of industrial estate land in 2020 was predicted.

Constraints of The Study

In order to estimate space requirement of industrial estate in İzmir in 2020, datas of employment in the past years were required.Employment datas between 1980-1999 were provided from The State Institute of Statistics (DİE) but since datas for the last three years was provided, the employment was estimated by projection.

Another constraint is trying to aquire,information about other industrial estates in the İzmir province from region directorates of industrial estate. Since many industrial estates do not have region directorate,the information about these industrial estates were obtained from EBSO which executes the works of establishing industrial estates. However, sufficient data base of industrial estates were not attainable from EBSO.

Chapter 2

PRACTICES AND CONCEPT OF INDUSTRIAL ESTATES IN THE WORLD

2. 1. Definition of Industrial Estates:

Various definitions of industrial estate have been made, but the definition which was made by United Nations Industrial Development Organization (UNIDO) is considered to be the broadest definition.

According to UNIDO's definition "*An industrial estate can be defined as a tract of land developed and subdivided into plots according to a comprehensive plan with or without built-up (advance) factories, sometimes with common facilities and sometimes without them, for the use of a group of industrialist*". (UNIDO, 1997, p.10)

Two points in the definition above need amplification. The comprehensive plan refers not only to the physical planning of the estate, but also to its immediate economic and social environment, and the role assigned to it in the regional or urban development plan. The common facilities mentioned may be needed to improve the productivity of tenant enterprises to upgrade the social infrastructure and amenities in the area. (UNIDO, 1997)

The definition which is so similar to the definition of United Nation and approved in the literature has been made by William Bredo. Bredo defined industrial estates like this: "*An industrial estate is a tract of land which is subdivided and developed according to a comprehensive plan for the use of a community of industrial enterprises. The plan must make detailed provision for streets and roads, transportation facilities, and installation of utilities. The plan may provide for the erection of factory buildings in advanced of sale or lease to occupants"*. (Bredo, 1960, p.1)

The points emphasized in both definitions are that industrial estates should be improved according to a comprehensive plan and should suit physical and social environment.

The general and approved definition of industrial estates in Turkey in The Industrial Estates Law, that developed by the Ministry of Industry and Commerce, is as followed: "*In order to build industry where it is suitable, guide urbanization, prevent environment problems, make use of information and data processing, in order for manufacture industry types to be put into place and improved, industrial estates are places where plots of land of which boards were allotmented, infrastructure services, social buildings, techno parks are present according to needs, and industrial estates are places that were provided for industry in order to manufacture*" (Industrial Estate Law: 4562, 2000, p.1)

These practices, known as industrial estates, put into practice in order to improve industry sector, minimize interregional imbalance and increase employment.

There is some inconsistency in terminology in the literature. There are many different practices regarding their objectives, scopes and scales because practices of an industrial estate has not been framed, and have different names in many country,. Making very extensive definition of industrial estate, Unido collected all practices below under the name of 'types and synonyms of industrial estates'. Different terms are used for industrial estates in many countries; American usage prefers 'Industrial Parks', 'Industrial District', and 'Industrial Tract', British usage prefers 'Industrial Estate' , Puerto Rican usage prefers 'Industrial Subdivision' to describe industrial estates. So, in order to provide concept confusion and limit the frame 'Industrial Estates' has been chosen for this study. Besides, it is used throughout a great part of the world.

<u>Industrial Estates-Types and Synonyms</u>

Industrial Parks (USA)
Industrial Zones (Italy)
Industrial Clusters
Office Parks
Science and Research Parks
Industrial Districts
Export Processing Zones
Business Parks
High Technology Zones

Integrated Industrial Zones
Industrial District
Industrial Tract
Industrial Subdivision (Puerto Rican)

UNIDO have described some of the characteristic features of industrial estates as follows:
A defined geographical area which contains businesses of an industrial nature. The essential element is that the estate is administered or managed by a single authority that has defined jurisdiction with respect to tenant companies. The authority makes provision for continuing management, enforcing restrictions on tenant access and utilities.

According to Unido industrial estates cover up a relatively large surface area of 40-80 ha. (Necessary to reduce the cost of infrastructure)
All factories and building have access to:
- Utilities (water and electricity)
-Common services (e. g. central effluent treatment, waste collection, fire protection)
The estate is responsible for providing:
-Roads and telecommunications
-Some estates also include housing for workers
more characteristic
Restrictions on companies exist in the estate:
-With respect to the type of construction
-Concerning the size of individual sites
-There is a master plan that guides; overall use of the built environment, e.g. energy or water efficiency.

Industrial estates are developed according to a 'master plan' that guides
-The physical planning of the estate
-The economic and social environment, depending on the role within the regional or urban development plan. (UMEP, 1996)

2.2. Practices of Industrial Estates In The World

Industrial estates began to appear just over 100 years ago. The objectives of industrial estates in the United Kingdom and the United States were to promote, plan and manage industrial development.(Bredo,1960)

In the first half of 19th century in North America, due to the fact that textile (weaving) factories were established near each other, first examples of 'industry estates' formed. In 'Economic Development Report' in America in 1885 the idea of 'industrial estate' was suggested as means of industrialization. English adopted the idea, Trafford Park Area Limited founded at Manchester, so England in 1896 was called the 'Mother of Industrial Estates'. In the United States the pioneer modern industrial district was the Clearing Industrial District, which began operations in Chicago in 1899. In both countries the idea was adopted comparatively slowly. (Bredo,1960)

Development of industrial estates being practiced in America and England had been slow until the Second World War. Industrial estates have been used with increasing success since the second world war for promoting and guiding industrialization both in industrially advanced and newly industrializing countries. According to Bredo, with the beginning of the Second World War industrial production had to be increased especially in the field of producing war ordnances. Thus wartime government factories were begun to be established. Many of industrial estates in Britain were formed around those larger wartime ordnance factories. In addition, the war increased the need of transferring industries to outskirts and making a separation between industrial settlements and housing in order to keep latter in safe. He mentions that sharpest acceleration in the use of estates in the United States is related within the concept of national security. According to him decentralization of industries by founding industrial estates in suburbs had the advantage of easy dispersal in case of national emergency. (Bredo,1960, p.9)

In Europe, the industrial estates have been slower in spreading. But it should be recognized that industrial zoning in many countries, especially Germany, Austria, The Netherlands and Scandinavia, has tended to mean more than in the two pioneering countries. Frequently cities have promoted industrial zones which in concept have approached what are called industrial tract in the United States. That are areas have

been set aside for industrial use and municipalities have been taken the initiative to provide them with the utilities required for manufacturing interest in industrial estate as such, however, has manifested itself only since the middle fifties. (Bredo, 1960, p.9)

The success of industrial estates in the British 'development areas' has influenced some countries of the common wealth, particularly India, which is using industrial estates both for industrializing and for decentralizing industry. The only other country using industrial subdivisions on a large scale is Puerto Rico. In this 'Operation Bootstrap' program, industrial firms, primarily those on the United States mainland. Other than in these countries, industrial estates are being started here and there throughout the world; there is little doubt that the idea is catching on and that its large-scale adoption may be prospect. (Bredo,1960, p.9)

In Turkey, industrial estates have become a means of encouraging industrialization lately. These days in different parts of the world developing countries are making more of these estates in order to encourage rapid industry.

According to studies made by United Nations; an often-quoted estimate from 1996 puts the number of estates globally at more than 12000. Growth in the developing countries of Asia has been rapid and recent estimates indicate that there may now be more than 20000 industrial estates globally by 2000 in China and over 5000 estates in other parts of the region. The number of industrial estates in therefore clearly increasing worldwide with a particular interest in the industrializing countries. (Francis, Erkman, 2002, p. 2)

2.2.1. Industrial Estates In Developed Countries

We will go over the countries-England, America, and Italy- where industrial estates first appeared, in order to observe their improvement and in which conditions they emerged.

United Kingdom: First industrial estates were established in order to make profit by private sector in the United Kingdom. After 1930 government of United Kingdom has promoted the establishment of industrial estates as one of the means for industrial development of depressed areas, under the Special Areas Legislation of 1936 and 1937,

the Distribution of Industry Acts of 1945 and 1950, the Town and Country Planning Acts of 1947 and 1954 and the Local Employment Act of 1960. (UNIDO, 1968, p.101)

The policy objectives and the role of the Government in the establishment of industrial estates have changed many times. Before the Second World War the objectives of industrial estates were to provide employment in undeveloped regions. In the post–war period, a nation wide policy of industry distribution was adopted. The government assumed full location control under the Town and Country Planning Legislation, with a view to avoid congestion in heavily industrialized and populated areas and including new industries to settle in development areas, unemployment areas, new towns and in the Netherlands Ireland. Fianally after 1960s the policy of objectives of industrial estates was to maintain a reasonable level of employment throughout the country. (UNIDO, 1968, p.103)

In England the Government and municipalities hire firms for long term for industrialists after establishing infrastructure and buildings of industrial estates. Thus, industrialists without putting any capital for establishing infrastructure and buildings could shortly start production.

United States: According to Bredo some planned industrial estates were developed in the 19th century, but they do not fit the modern conception of industrial estates. The Clearing Industrial Region which began operations in Chicago in 1899 consist of seven tracts of 2000. (Bredo, 1960, p.11)

The growth of industrial estates in the US showed a great increase with the Second World War and this increase maintained after the Second World War. The growth of industrial estates in the US emerged without intervention of the federal states. Therefore industrial estates in some ways affected the government policy of 1951, and also had a strategical role in distribition of new industry estates.

According to Bredo, the government encouraged decentralization of industry. Decentralization policies of industrialists seem that they aim:
1-To reduce costs and remain competitive; 2-To overcome the lack of suitable manufacturing facilities at existing plant sites; 3-To get closer to market for sources of

raw materials; 4-To take advantage of improved transportation or more favorable labor situations in certain localities, particularly suburbs; and 5- To obtain dispersal in case of national emergency. (Bredo,1960, p.12)

As it is in most industrialized countries, in the US industry had tendency to be established and gathered near big cities, which provided external economies related to different services, business relationship, transportation, finance, educated manpower. However the high price of land in big cities pushed industries to industrial estates established in small cities. Lawful engineering services and finance comfort for presentation and construction in these estates have been sufficient encouragement elements for an entrepreneur to settle here. Generally industrial estates used to be established by entrepreneurs such as railway companies and real estate agents who have aim for profit. These entrepreneurs thought of their profit when they did their duty and service. Afterwards, since industrial estates increase employment, wages, trade and tax incomes, local municipalities and society organization observed advantages that society would obtain by industrialization.

Italy: In Italy it is possible to observe improvement of industrial estates in two basis period. The objectives of establishing industrial estates differ in these two periods. First period is from 1917 to 1957 and second is fallowing period of 1957.

In 1904, Industrial area (zone) of Naples, the first industrial estate, was founded by the municipality under the special state law.Between 1917 and 1949 seven industrial estates were established in the industrially developed Northern part of the country. However it was only in 1953 that an industrial estate was opened in the undeveloped Southern part of the country at Catania in Sicily. (UNIDO, 1968, p.93)

In 1957 and 1959 the Government passed two laws on the development of southern Italy; these laws stressed the role of industrial zones and estates in the industrialization of that region and set forth uniform rules for their establishment. (UNIDO, 1968, p.93)

The industrial estate program in the South is part of a comprehensive public investment program. In 1950 the Central Government established the Cassa per il Mezzogiorno (Fund for Southern Italy) to finance a public investment program. (UNIDO, 1968, p.63)

It was offered special encouragement to establish industrial estate in southern of Italy. Industrial estates that were established before 1957 generally established and run by local groups such as Chamber of Commerce and Industry, half private and half judicial groups. The objectives of these groups were to improve local economic, social and politic benefits.

From 1950 to 1957 the Government encouraged private investment in order to increase production level not only in industry but also in agriculture, decrease the level of income and the investment gap between Northern and Southern Italy. Nevertheless the industry continued choosing the Northern where industry developed and industrialized. The main reason for this is to benefit from external economies, opportunities and advantages that provided by industrialization and investment in Northern. And the maximization of these can only provided by big cities.

After 1950 industrial estates began to be established in Canada, Ireland, France, The Netherlands, Denmark. However, no industrial estates providing factory buildings are being provided in Germany and Scandinavia. They improved industrial zones or sites reserved for industrial development have been known for a long time, but where factory buildings was not built in advance. Comprehensive city zoning and planning had its early beginning in Germany and Scandinavia. Since industrial zoning was resulted in the specialized use of land for industrial purposes there may have been less of an incentive and perhaps less need for developing estates. (Bredo, 1960)

2.2.2. Industrial Estates In Developing Countries

Some countries which adopt planned development as means of development in developing countries have taken encouragement precautions in order to have balanced development among regions, active resources in developing regions, stop unemployment so that reduce the social cost that emerged by industry and relocate industry in undeveloped regions. However, these attempts of support and encouragement have not been successful in these needy countries.

Industrial estates in India and Puerto Rico are examined in order to see implementation of industrial estates in developing countries.

India: The growth of India economically is mostly based on production of small industry. In the five-year development plan, it was pointed out that small industries had an important affect on growing national economy so in order for small industries to be able to defense themselves by having rivalry power, they were supported by the Government. In development plans, it was pointed out that it was necessary to practice different programs and develop comprehensive programs in order for small and medium scale industry to be used as means of rapid growth. These programs, as well as fairly important financing aid contain establishing and running of industrial estates. (Ardoğan,1983)

The Central Government recognized the value of industrial estates as an integral part of its program for promoting small scale industry and for controlling industrial location. The major inspiration for development of the Indian industrial estates came from observation of British effort in the development areas. The industrial estates program was initiated in 1955. By early 1959, 32 estates were completed and construction of 28 was expected to be completed by the end of the year.The main aims of industrial estates in India can be summarized like this:1-Increase productivity as well as working conditions. 2-Help region cooperative soul increase and get small entrepreneur aggregate in order to enlarge and have power. (Bredo, 1960, p.28)

In most of cities in India, small or large industries grow without any plans, unsystematically. In the cities apart from a few buildings suitable for production, residence buildings converted to industrial buildings with industrial development. Another aim of industrial estates is to take unsystematic development under discipline (Ardoğan, 1983, p.22)

In India industrial estates were mostly established with advice of 'planning commission' in small cities or nearby in order to encourage industrial development especially in rural regions. (Ardoğan, 1983, p.22)

Industrial estates are being constructed directly by the government, through the National Small Industries Corporation or by the States with the financial and technical assistance of the Central Government.

Puerto Rico: Before 1950s the Government of Puerto Rico tried the policy of obtaining the industries considered as key industries like cement, paper and glass by the Government ownership and management. The main aim of this policy is not only to cover the restriction appeared during the war, but also to encourage and improve private industry sector. Since the enterprises were not successful, after the Second World War important efforts were made to attract industry from the mainland of the USA.

Not until 1950 this program was noticeably successful, when under 'Operation Boot Strap' a sharp change in policy occurred. When the program was being put into practice in Puerto Rico, in the USA a campain was started to direct industry to this country. Special incentives were provided to induce firms to establish branch plants or new enterprises in Puerto Rico. These incentives consisted of;
1-Improved land and factory buildings, provided for sale or a reasonable rental,
2-Subsidized transportation of equipment from the mainland to Puerto Rico,
3-An incentive for decentralization in Puerto Rico consisting of subsidized rental and per sonnet training services.(Bredo, 1960, p.15)

These incentives, combined with an active promotional policy and backed by strongly motivated governmental agencies, made 'Operation Boot Strap' a very successful program. By the middle of 1958, more than 500 firms had been induced to settle in Puerto Rico.

The Government of Puerto Rico used the variation of taxes as means of encouragement in order to attract new industrialists. On one hand low taxes and on the other hand variation of taxes according to characteristic of industry attracted industries in Puerto Rico. The first industries attracted here were labour intense and small scale firms with small capital. (Ardoğan, 1983, p.23)

The industrialization program has been conducted by the Puerto Rico Industrial Development Company, an agency of the Economic Development Administration

(PRIDCO). A unique feature of planning in Puerto Rico is the close integration of the industrial subdivision program with the land use planning program. Industrial zoning was given a firm legal foundation in Puerto Rico planning board, which has complete responsibility for land use planning and zoning throughout the Island. At present, comprehensive research and planning are being conducted to determine the location of additional industrial zones and other land use activity. (Bredo, 1960, p.15)

2.3. Types of Industrial Estates

Bredo and United Nations have described some of the characteristic features of industrial estates versus to distinguish industrial zones and industrial areas. It is important to note, however, that there is some inconsistency in terminology in the literature. "*An 'industrial zone' is merely an area of raw land set aside for industry. The industrial zone was a part of an urban or suburban centre restricted to transport and distribution facilities and the price of land within the zone".* (UNIDO,1968, p.6)

An 'industrial area' is a parcel of improved land subdivided into plots for the accommodation of industrial establishments and offered for sale or for lease. The industrial area serves establishment of industries of all types and sizes. Its size may allow advantage to be taken of economies of scale in providing the infrastructure, which may be passed on to the occupants. An industrial area may approximate an industrial estate, but the essential differences are that in the former there is no unified and continues management and that, beyond land and utilities; it provides no additional incentive to industry. However, industrial estates would serve principally to promote small and medium-scale industries. (UNIDO, 1997, p.10)

Among small and large scale factories there is no general and acceptable numerical distinguish. Although it varies in different countries, in general it is classified according to number of workers who work in firms and quantity of capital. The classification of firms by United Nations is; firms employing 0-100 employees are small scale, 100/200-2000 employees are medium scale and 2000+ employees are large scale. In our country the classification of State Institute of Statistics (SIS) is approved. According to SIS firms are classified as follows; firms employing 0-9 employees are small scale, 10-99 employees are medium scale and 100+ employees are large scale. Therefore most firms

in our country according to classification of United Nations are small scale. Industrial estates may be classified according to improvements and facilities, industrial activity, motivation and sponsorship (ownership) and management. (Unido,1968)

1-Services and Facilities: According to services that industrial estates provide it is divided into three

a- Industrial tract: This is an improved tract of land including provisions for streets and roads and installation of utilities. These kinds of industrial estates generally deal with plot speculation,infrastructure, taking plots of lands, having appropriate quantity for industrial estates to become established as group. Although the improvement of these kinds of regions may be out of order, the level of usefulness by establishing industries in industrial estates is minimum.

b- Industrial subdivision : This is an improved tract of land with industrial buildings, designed for a small group of enterprises. No special service is provided for facilities in a subdivision. When an industrialist decides to make investments, they hire not only the land but also the building of a firm. Therefore, they save from expenditure of building and time. In addition to the time passing to production shortens.

c- Fully packaged estates: This is an improved tract of land with industrial buildings to provide sufficient economies of scale and offer special facilities and services to industrial occupants. These kinds of regions are present especially in England. (UNIDO, 1978)

2-Industrial Activity: An estate is described according to sector dispersion and relationships in firms that take place in industrial estates, as:

a- Composite (mixed): Containing establishments engaged in a variety of unrelated industries the most common is industrial estates. Generally industrial estates are composite in developing countries. The objective of these industrial estates is to provide a tract of land.

b- Ancillary: These are the regions where small scale firms produce for large scale firms in different fields. In these estates each industry firm does certain production

according to coordinate production program. The most important advantage of these estates is to provide more manufacturing economies and activity that come from specialization for small industry firms. In Turkey, in industrial estates , where large scale firms (Tofaş-Bursa industrial estate, Vestel-Manisa industrial estate) are present , there are a lot of small scale firms that manufacture for those large scale ones.

c- Functional (single-trade): Often called 'specialized', accommodating either establishments engaged in the same manufacturing. In developed countries the number of specialized industrial estates is increasing.

In these kinds of estates, technical education and aid, getting collective raw material and common sale of products, and establishing common treatment plant provide external economies. Especially, leather industrial estates are examples for this kind.

3-Motivation: Motivation is related to objectives.

a- Developmental: A developmental estate is one intendment to advance, improve or increase the level of industrial activity in the area in which it is located. This will usually be semi-rural or rural areas.

b- Promotional: Objective of all industrial estates is to encourage industry whereas the actual objective of these kinds of industrial estates is encouraging industry in order to develop economy in undeveloped regions. In Italy and England one of the most important objectives of establishing industrial estates is to develop undeveloped regions. In order to pull industry to undeveloped regions many encouragement was carried out.

c- Dispersal: These estates are intended to accommodate enterprises that on account of lack of space for expansion or environmental reasons are required to move from urban areas. (UNIDO, 1997, p.11)

4- Sponsorship (ownership) and Management: It is classified in three groups according to source of financing and type of administration.

a-Private (industrial estates that established by private sector): These estates are established by co-operative society, limited company or an association of industrialists

or by owners of land who want to sell their land for better price. Due to the high cost of infrastructure and benefiting in long term, these regions are not encountered in developing countries.Industrial estates that were established by private sector can be seen in Canada, America, Australia, and France.

According to Leman Ardoğan and others, in a survey in the USA 70% of industrial estates were established with the objective of profit by private sector (especially railway firms and land owners), 24% of them by society organizations that did not aim profit, and 6% by local states. (Ardoğan, 1983, p.18)

b-Private assisted (industrial estates that established and run by both private and the public sectors): These are established and run by co-operative society, limited company, an association of industrialists and municipal and central state.

Especially chambers of commerce and industry and local administration have an active role on establishing, planning, constructing and administrating industrial estates and they obtain a great number of help from the state. Industrial estates known mixed industrial estates are the most common ones in the world. Industrial estates in Turkey are this kind of industrial estate. (UNIDO, 1997)

c-Governmental (industrial estates that established and run by the public sector): These are established by central state or municipal. States establish these estates in order to encourage industrialization, decrease imbalance among regions or avoid crooked urbanization. Government sponsorship used to be very common in the past. Donor agency funding also played an important role in the establishments of estates in developing countries. In the recent years, privately financed estates have become very common and much of the donor assistance has shifted to advice and the funding of various support services, which should preferably be run by industrial association (UNIDO, 1997)

2. 4. Economic Benefits of Industrial Estates

Industrial estates offer many economic advantages to industrialists, local communities and countries. All size of enterprise benefit from locating in industrial estates, but

especially small and medium- scale enterprises have the greatest benefit. Since, the large enterprises can provide large resources of finance itself and skilled administration but a small enterprise can obtain only as a member of an aggregation of firms on an industrial estate.

Bredo states that the economic benefits of industrial estates arise to an important degree from the following:
1-Economies of scale derived from the development of the estate.
2-External economies accuring largely from the clustering of enterprises.
3-Provision of certain services which become feasible as a result of an aggregation of a sufficient large number of firms.
4-Reduction of risk to the individual entrepreneur and the financing agencies, due to the aggregation of firms. (Bredo, 1960, p.31)

2. 4. 1. Economies of Scale

Economies of scale refer to the reduced costs of operation associated with the increasing size of a business or its volume of production. Economies of scale are related to industrial investment itself. It is the size of industrial estate, types of service for facilities provided and diversification of industry. (Bredo, 1960, p.31)

An industrial estate is a unique type of enterprise which provides suitable location, accommodation and services for a comparatively large group of industrial enterprises.

The companies or government sponsoring industrial estates region directorate are responsible for construction and installation of facilities, layout and administration (before and after the building construction phase is completed) of industrial estates. It has a single firm character. Thus it is the fact that the development of an estate that will accommodate many firms can be done more cheaply per unit of facilities provided than can be done by such firm singly. According to Bredo, up to certain limits it may be expected that cost of estate development and administration decline per unit of each facility with the increasing size of the project. In other words economies of scale refer to the decrease in per unit cost of access roads, streets, water, electricity, sewage

disposal, treatment plant and land. However, since optimum industrial estate size depends on different factors, it has not been determined yet. (Bredo, 1960)

Economies of scale on one hand increase benefit of government and companies sponsoring an estate; on the other hand decrease the cost of firms present in industrial estates. Therefore, developing countries that have limited resources expand industrial estates.

2. 4. 2. External Economies

"External economies are cost saving that emerge because of economic environment in which firms are present and be established independently and benefit without paying any price". (Nihat Bingöl, 2001, p.VI). In other words it is the effect to reduce the cost of production because of economic environment in which operates. The other definition of external economy by Bredo is that the external economic benefits from spread of technical know-how and skills among workers and management, mutual inspiration, a large pool of industrial labour and the stimulation many kinds of entrepreneurship and improved services. To a degree the economies of scale attributable to the development of an estate are also translated into external economies to the industrial enterprises. (Bredo, 1960,p.33)

Bredo states that the use of external economies by a firm depends on types of industries located on the estate. Specialized and ancillary industrial estates can create more external economies because their production is similar. In as much as the external economies derived. Exchange and circulation of information of skilled workers, know-how and prices, raw materials, processing techniques and markets and also improved services used common can be added.

An estate makes it economically feasible to provide certain facilities and services that would be too costly for an individual enterprise, but are possible for a large number of firms. The agglomeration of industries makes it economically feasible to provide many other facilities, some of which may require heavy capital investment, such as railways and port installation. (Bredo, 1960, p.33)

Reducing of risk is another important economy by concentrating of firms within industrial estates. According to Bredo risk of investment decreases for sponsoring agency of industrial estates making standard-type of factory buildings that fit many kinds of industries. If any firm failures, potential renters are usually available to replace these firms. This security encourages the sponsoring company and entrepreneurs because it lowers the cost of entry.

2. 5. The Position and Importance of Industrial Estates in City and Region Planning

In general the fact of urbanization is a result of industrialization. The speed and formation of urbanization usually depends on speed of industrialization in every country. In the first stages of industrialization, polarizing of industrial activities caused an effective usage of capital. However later the procedure of industrialization caused economical and social problems that are difficult to be solved. While polarization is going on not only underdeveloped regions form but also in regions and centers where polarization forms, over growth causes difficult problems to be solved.

Industrial estates contribute to industrial and economic development and in addition they can be used as an important tool for the urban and regional planning policies of the country. According to United Nations industrial estates serve;
a-to promote decentralization by preventing or checking excessive concentration in or growth of single urban areas especially large metropolitan areas,
b-to increase the economic, productive and employment base of urban communities,
c-to regulate the inflow of industry and guide its orderly location on the most suitable land within the metropolitan area,
d-to strengthen the economic base of small and medium-size towns,
e-to provide a healthier and more attractive urban environment by separating non-industrial and industrial areas,
f-to minimize distance to work and reduce load on the transport system,
g-to maximize efficient land usage and reduce the cost of land and land development,
h-to integrate urban marginal population into the productive industrial system,
i-to provide sites to relocate industries displaced by urban renewal projects,

j-to achieve economies in the provision of urban services and utilities. (UNIDO, 1997, p. 15)

The potential contribution of an industrial estates program, adequately supported and coordinated with other development programs, related to regional development strategies two contributions come first.

First, industrial estates stimulate the relocation of industries to peri-urban or rural areas, helping to relieve congestion and pollution in metropolitan areas, strengthen the industrial base of small and medium-size towns and arrest rural-urban migration. To put it in a different way, the contribution of industrial estates will be the achievement of more balanced regional distribution of employment and production or the orderly location of industry within the metropolitan area. Additional benefits of industrial estates to society are reduced traffic congestion, increased efficiency of urban land use and reduced costs of land development and the provision of utilities. (UNIDO, 1997)

Second, in order to avoid interregional economic unbalanced, industrial estates aim to speed and direct industry activities. The aim of practicing this policy for governments is to reduce social costs by obtaining balanced regional development.(Unido,1997)

Each country generally has differences in interregional economic and social developments.The density of differences is much more in undeveloped countries comparing to developed countries. Problems in undeveloped countries are:
- Increasing unemployment,
- Income level that is under the average of country,
- Migration of youth population to developed countries,

Especially for youth population abandoning country, make situation of region worse. First of all, form of population in region goes bad and the need of quality manpower emerge. On the other hand, limited capital in region fallowing manpower goes to developed countries. So that makes economic problems chronic.

In developed regions, a rapid urbanization starts parallel to intensifying industry. As a result of unsystematic urbanization some problems such as residence need, increasing

number of shanties, traffic congestion, spoiling natural environment, water and air pollution, loud noise emerge.

Bredo expresses contributions of industrial estates like this; "*Industrial estates provide district advantages to the urban centers and to the regions where they are of particular interest to local government concerned with guiding the growth of their communities and to state and national governments wishing to promote the industrialization of region"*. (Bredo, 1960, p.39)

An industrial estate may become the nucleus for further industrial and commercial growth. New enterprises may be induced to settle near the estate because of the mutual advantage of providing goods and services for each other or because of benefits deriving from the existence of labour skills and the general technological stimulation generated by industry on the estate. The need for constructing housing and facilities for carrying workers and goods may need to be improved and expanded to meet the demands of estate. (Bredo, 1960)

Location of industries determines direction of city growth where there is no enough planning inspection. So industrial estates settled along the city surroundings with feature of estates on settled texture of city may cause settlement problems in addition to environmental effects caused by unsystematic and unplanned settlement areas near industrial estates. (Çezik, Eraydın, 1982)

Industrial estates are put into practice on settlement centers where there is rapid and dense changes in order to direct urbanization and improve industry activities properly. For industry firms being disorganized and separated from each other cause not only some problems regarding city planning but also increase some environmental problems and infrastructure costs. In order to organize urbanization and industrialization industrial estates offer great opportunities by inspecting environment effects created by industry, having industries manufactured easier and cheaper in estates where industries are as a whole, and benefit from less cost infrastructure services. (Çezik, Eraydın, 1982)

Strict selection of industry setting in an area is feasible through industrial estates. Industrial applicants may be selected who are likely to succeed and who will tend to

promote industrial diversification and economic stability. With judicious care firms may be chosen whose competitive position improved by the location in question. In Turkey, because specialized industrial estates on different characteristic have not been able to put into practice, this reduce usability of industrial estates as a means of urban planning. Therefore present practice change into an area where each kind of industry is a whole near settlement centre.

Bredo mentions that land use zoning is insufficient practices because even with efficient urban administration zoning is not fully effective as a control device and encroachment of other uses of land may be permitted in areas zoned industrial. So, it is much easier to obtain all the benefits of zoning by using industrial estates. In the underdeveloped big cities, industrial estates may be established nearby, partly with the object to decentralizing industry from the city. (Bredo, 1960, p.39-40)

Chapter 3

PRACTICING OF INDUSTRIAL ESTATES IN TURKEY

3. 1. The Development of Practicing Industrial Estates in Turkey

Turkish industrialists, who have not been able to find enough capital in order to be able to establish their own firms, have faced problems such as finding an appropriate place, setting up infrastructure foundation, constructing building of firms, obtaining machines and equipment, finding adequate number of personnels and having required capital to run the firms. They also have not been able to show enterprising power. The industries, that were developing unsystematically and without plan in the centre of cities and rural areas were damaging environment seriously and were not be able working productively due to lack of technical infrastructure.

The concept of industrial estate was mentioned just before the first five-year development plan (1963-1967) in 1961 since then this concept have always been in development plan and programs in order to improve planned industry in Turkey.

In 1961 the Ministry of Industry with the assistance of A.I.D (Agency of Investment Development) in the USA had 'Checchi and Company' firm done a feasibility report indicating the position and problems of Turkish industry as well as the profit that might come from industrial estates.

As a result of the counseling went between 'Checchi and Company' company and State Planning Organization, in four region (İstanbul-Adapazarı, Zonguldak, Adana-Mersin, Bursa) nine urban areas were determined. Among these urban areas, Bursa was chosen due to the fact that it was the most appropriate. (Onat, 1969, p.12)

Bursa Industrial Estate, started to be improved in the end of 1962, was the first modern industrial estate in Turkey. Bursa industrial estate was estimated that it would get full in 15-20 years time After completing the constructions in 3-4 years it got full with 70 % . In addition to this it showed great consistency. (Onat, 1969, p.12)

As a matter of fact, in 1964 Manisa, in 1967 Konya, in 1968 Bartın and Ankara Industrial estates were planned. Therefore practicing of industrial estates started to be spreading.

In the planned development period, regarding micro economic industrial estates Turkey had three considerable objectives; 1- To fulfill balanced growth by attracting industry to these regions and encourage undeveloped regions to grow but not to cause imbalance among the regions. 2- To fulfill planned urban growth by gathering unsystematic industry firms with a planned settlement system. 3- To speeding industrialization and increasing employment.

Reduction and immunity on customs have been applied to the firms that present in organized industrial estates since the beginning of the planned period until now in order to encourage industry financial encouragement such as guaranty of rate of exchange, import facilities, long term loans with low interest . (Çezik, Eraydın, 1982, p.3)

Yet, looking at fourty-year of practice of industrial estates in Turkey, objectives such as industry encouragement, interregional balance and space arrangement have not been adopted successfully. Looking at dispersion of industrial estates, that are being established and run these days, it can be seen that first industrial estates became dense in developed regions. If we examine investments of industrial estates that are on the project stage, with politics of 'an industrial estates for each province' industrial estates are being tried to become expanded throughout the country. Thus, if industrial estates are stopped being used as a means of development in undeveloped regions, we can say that they turn to become a means of encouragement of cheap land for industrialists. Numerical evaluation of this subject with its reasons will be explained in chapter 3.

3. 2. The Judicial Bases of Industrial Estates in Turkey

3. 2. 1. Five-Year Development Plans

One of the reasons for establishing industrial estates is the development plans.Despite the studies on establishing industrial estates before the planned period (1962 Bursa), industrial estates became institutional with development plans.Industrial estates were

evaluated with facts of industrialization, regional development and urbanization in development plans.

1-The Fırst Five-Year Development Plan (1963-1967)

The first five-year development plan under the title of 'Industrial Encouragement' suggested industrial settlements to be established orderly by choosing industrial regions in order to increase the yield in industry and the balance in regional development. (DPT, 1963, p. 402)

This paragraph forms lawful bases of all industrial estates that would be established later. In the period of this plan, Bursa (1964) and Manisa (1966) industrial estates were established.

2-The Second Five-Year Development Plan (1968-1972)

It was pointed out that one of the main objectives in the period of second plan was to obtain interregional balance. In order to increase industry by widening the scope of industry encouragement precautions, it is said:

"Iindustry estates that provide cheap water and energy usage as well as financial and economic encouragement will be established In order to pull private industry to undeveloped regions". (DPT, 1968, p.542)

Furthermore, in this plan it is suggested that industrial estates are suggested to be intensified in some certain centers and be supported by infrastructure facilities. It is said:"*In order for industry establishments to be improved, industry regions having prepared infrastructure will be established near cities which have developing potential."* (DPT, 1968, p.542)

The industrial estates that had written decree in the period of second plan are Ankara, Erzurum, Gaziantep, Eskişehir, İstanbul (Deri), İstanbul Kurtköy.

3-The Third Five-Year Development Plan (1973-1977)

For the first time the concept of industrial estate was described clearly In the third five-year development plan. In contrast to previous plans, this did not include the concept of region. And also regional development objects were not explained. Related to this principal, the factor of ‘ being means for regional development’ which is one of the objects of industrial estates is still effective whereas other objects such as ‘industry encouragement ‘ and ‘ place arrangement’ became more important. Therefore the aim of establishing industrial estates changed during the third plan. Which is confirmed in the plan as in the paragraph below:

“In order for low quality industries to become established, industrial estates will be used as means of encouragement to arrange industry activities in urban centers that have development potential”. (DPT, 1973, p.844)

These are the industrial estates that have written decree during this plan:
Adana, Antalya, Afyon, Aydın, Ağrı, Artvin, Amasya, Bilecik, Bolu, Balıkesir, Burdur, Bursa (İnegöl), Bartın, Çorum, Çankırı, Çanakkale, Diyarbakır, Elazığ, Eskişehir, Erzincan, Edirne, Giresun, Gümüşhane, Hatay(İskenderun), İzmir, Isparta, Kastamonu, Kars, Kayseri, Konya II, Kırşehir, Kırklareli, Kütahya, Muğla, Malatya, Mardin, Nevşehir, Ordu, Rize, Sakarya, Samsun, Sivas, Sinop, Tekirdağ (Çerkezköy), Trabzon, Tokat, Urfa, Van, Yozgat

4-The Fourth Five-Year Development Plan (1978-1983)

In the period of the fourth five-year development plan, interregional imbalance increased. Particularly, undeveloped regions had fewer shares of investments. The subject of regional development updated again.Supporting undeveloped regions by industry investments became more important. In the plan on the subject of industrial estates:

Comprehensive industry settlements formed by side industries and heavy industry foundations like industry complex, will support the objective of regional development, and become a united whole. (DPT, 1977, p.277)

The authority of establishing, undertaking and inspecting industrial estates was given to the Industry and Technology Ministry.

5-The Fifth Five-Year Development Plan (1985-1989)

In the period of this plan,it was illustrated that location should be on places that have development potential and transportation possibility according to the 'regional development' scheme which has particularly prepared for the location of industrial estates. The sectors were aimed to form and specialize the industrial estates according to the feature and potential of the regions. (DPT, 1985, p.163)

In developing regions, residence space,construction of flats for employees and complementary small side industry sites next to industrial estates were required to be encouraged.
It was stated that side industry and space for residence that industrial estates may pull into the environment would be taken into the consideration in the stage of plan and expropriation. (DPT, 1985, p.165)

6- The Sixth Five-Year Development Plan (1990-1994)

It was stated that it should be proceeded to establish industrial estates and with the decision of the location 'region development schemes' should be taken into consideration in order to provide balanced industry between regions and encourage industrial development. (DPT, 1990, p.318)

It was suggested that in provinces in which industrial estates are present, new industry investments - if it is possible- should be made. (DPT, 1990, p.366)

7-The Seventh Five-Year Development Plan (1996-2000)

According to development of provinces described 'regions having priority in progress' and 'developed and normal regions' two politics were determined. Industrial estates that are in the stage of expropriation, site analyses-plan and carrying on construction in regions that have priority of development, suggested to be completed and specialized

quickly. Furthermore, it was suggested that in developed and normal areas the cooperation between Research&Development activities and university –industry should be improved in order to establish specialized industrial estates quickly and to be organize them for using the last technology,. (DPT, 1996, p.177)

In order for industry to be directed to centers of systematic urban development and chosen regional development, making greatest use of industrial estates that have positive features like providing external industry for both industrial activities and systematic urban development was considered. So, in cities where industrial estates arepresent, decentralization of industry was aimed by discouraging of present industrial estates.

8- The Eight Five-Year Development Plan (2001-2005)

The eight five-year development plan , under the title of ‘Region Plan‘, suggested imbalance to be decreased between regions.Therefore, there should be studies on present sectors and sectors that have improvement possibility for specializing. The concept of industrial estates is not different than the previous plans. (DPT, 2000, p.74)

In order to form ‘new industry focuses’ and speed up ‘sectoral specialization’ improving education, consultation services, entrepreneurship, supportting Re&De and technology, forming partnership and cooperation , speed up institutionalization and specialization by industrial support were aimed as well as strengthening units, that would give these services, financially and institutionally. Industrial estates and small industry sites were considered as means of objectives above coming true and forming industry focuses for presenting ready building land with infrastructure. (DPT, 2000, p.74)

By taking into consideration of advantages such as activating local entrepreneurship and increasing employment positive effects of industrial estates that guide urban development, were aimed to be expanded. Therefore removing interregional imbalance which one of the most important reasons for establishing industrial estates are not valid any more. Furthermore, industrial estates became a means of producing middle and large building lands. Regions faced with a great number of lawful problems resulted

from not doing law arrangement for industrial estates that had 40 years history. In this plan, it was asked to arrange the function of 4562 law of industrial estates by studying the current law (DPT, 2000, p.211).

3. 2. 2. Industrial Estates Law- 4562

Industrial estates law-4562 has been approved and adopted by the parliament on 12th of April, 2002. The aim of the law is to arrange running, construction, and establishing of industrial estates (Law no: 4562)

Industrial estates law consists of six chapters. The first chapter of the law comprises the aim, the scope, thedefinitions and the abbreviation of industrial estates. Second article explains the scope of the law as the rules and principles that determine the establishment, management, administration duties, and responsibilities of related institutions. Third article is about the definitions of industrial estate (Law no: 4562).

The second chapter of the law comprises the rules regulating establishment process and status of industrial estates.

The third chapter of the law comprises the organs and executive committee, auditing committee and estate directorate.

The fourth chapter of the law is on the financial aspects comprising rules and principles regulating the incomes of industrial estates, participation fees of enterprising organization and credit that was supplied to industrial estates. The last chapter of the law comprises the temporary rules.

From 1961 when the first decision made about establishing industrial estates until 2000 when the law came into force, 41 in substructure of industrial estates were completed and started operating. During these years industrial estates that were being runned and are on research- project stage, were established infrastructure were built and were runned according to regulations by the Ministry of Industry and Commerce. In this period, industrial estates came across a great number of problems since they did not have their own law. Considering those problems, the law of estates was formed.

There are some changes in the process of estate foundation with this law that derivesfrom the new structure, status of industrial estates and enterprising organization. First, industrial estates came across a lot of judicial problems because they did not have legal status. The most important of these problems is that industrial estates were not been able to be represented in courts due to the fact that enterprising organization did not have legal status, in trials against industrial estates,. By this law industrial estates obtain legal status by the Ministry approving establishment of industrial estates. (Law no: 4562)

Second, enterprising organization paid the expropriation expenses to plot office and province private administration in order to expropriate private ownership lands in industrial estates. Afterwards these establishments expropriate the lands on their names for public interest and register on one of the establishments that are present in enterprising organization. Expropriation authority for public interest has been given to enterprising organization by this law. Therefore,expropriation costs and duration will decrease by the authority.

Third, before this law came out, firms would get construction licenses at municipalities, if industrial estates were in frontier of municipality and municipality mücavir. But if they were outside frontier of municipality and municipality mücavir, the firms had to get construction licenses at prosperity province directorate. Since industrial estates would choose places in small city municipalities or near frontier of municipalities that would be included at any municipality frontiers later getting construction licenses at prosperity province directorate would take more time,. Industrial estate directorate had the authority of inspection and giving construction licenses to firms that would be established in industrial estates. This change has not only advantages but also disadvantages. The advantages; 1-Enterpreneurs will save some time due to duration of giving construction license becoming shorter, 2- the inspection of constructions will be easier by industrial estate directorate . The disadvantages; 1- with cooperation of municipality –organized industrial estates (enterprising organization) municipalities have been removed from the process by decreasing their authority and commitment. Thus, industrial estates will choose places in frontier of municipalities in order to benefit from urban advantages. But municipalities will show resistance because

industrial estates will be a burden to them. 2- Inspection and giving construction licenses will cause a lot of heads.

Forth, enterprising organization would have the opportunity for benefiting from the tax and fee exemptions during the process of establishment as a corporate identity.

In conclusion, the law of industrial estates mainly regulates the structure and legal status of industrial estates.

3. 3. Establishment of Industrial Estates

When organized industrial estates are established **a**ccording to 4562 industrial law and 'Location Selection Regulations of Industrial Estates' and 'Practice Regulations of Industrial Estates' based on the law , the process should be ;

1-First application : the report that arranged by associations and establishments that want to establish industrial estates and include reasons for establishing industrial estate asked by The Ministry of Industry and Commerce is presented to the Industry and Commerce Ministry by the approval of the governorship.

Activities, are executed by The Ministry of Industry and Commerce conclusion of location selection. Associations and institutions participating in establishing of industrial estates with the approval of governorship. However, studies and research through process of location selection are done by the ministry (Practicing regulations of industrial estates).

2-Location selection: location selection is started after approval of industrial estates report by the Industry and Commerce Ministry. Studies made in the process of location selection (more details will be examined in chapter 3.4)
-Research studies about general evaluation of province or district where industrial estates are established is done.

-Threshold (eşik) analyses are done in 1/100000 scale in order to determine alternative areas where industrial estates can be established.

-Alternative areas are examined and according to their features 1/25000 scale evaluation is done. After the report the most appropriate area or areas are proposed as a place of industrial estate.

Alternative areas are examined in the place by 'location selection committee' including representatives of related institutions with the coordination of The Ministry of Industry and Commerce and one of the areas is chosen as a place of industrial estate. The decision about the place of industrial estate is made by a unanimous vote of members of location selection committee. The committee may not accept any place for industrial estate. This case is stated in the conclusion of 'report of location selection committee' and governorship is informed about the decision made by the committee by The Ministry of Industry and Commerce (Regulations of location selection of industrial estate)

3- Proposal of Project to the State Plan Organization: When the place and the size of industrial estate is certain, it is proposed to the State Plan Organization to be taken into the investment program.

4-Obtaning legal status: Enterprising organization is established in order to take on commitment and establishment of industrial estate and in order for estate to obtain legal status;
a- particular administration of province
b- province, district or city municipality where industrial estate is present, and also big city municipality in big cities,
c-Chamber of Commerce, Chamber of Industry or Chamber of Commerce and Industry in province and district
d- Industrialists association or cooperative
the establishments protocol which states positive opinion of the governor and signed by representative of one or more of these mentioned above obtains legal status just after approvement by the ministry and getting register (Industrial estates practicing regulations).

In order for associations or cooperatives of industrialists to be able to participate in establishing industrial estates. Establishing industrial estate must be in rules and

regulations and main contract, members and partners should have register certificate and the number of the members should be at least twenty. (Industrial estates practicing regulations).

In order for private industrial estates to be able to obtain legal status, frontier of industrial estate, appropriateness of land to location selection regulations and record of the land that shows the land is recorded on name of genuine or legal individuality must be approved by the ministry.

5- Obtaining of public interest decision and authority of expropriation: when enterprising organization applies to the ministry with 1/5000 and 1/25000 scale cadastral map and 1/25000 scale topographic map, the ministry gives enterprising decision with authority of expropriation to enterprising organization. (Industrial estates practicing regulations)

6- Expropriation of the land: when location selection is done from lands belonging to national treasury or the public association and foundation , bargaining either in advance or by installments these lands are sold to industrial estates if there is request but no inconvenience. In the chosen region if there is private property, this property is either bought with acceptance or expropriated by enterprising organization.

7- Approval of implementation plan: preparing 1/5000 or 1/2000 master plan and 1/1000 implementation plan of chosen area come into force after approval of the ministry with the decision of administrative province committee.

8- Preparation and construction of infrastructure projects: when infrastructure practicing projects and investigation and procurement files of these projects are arranged, infrastructure construction procurement is done and then constructions are started.

9- Allotment of lands: after completing construction of infrastructure, lands are allotted to industrialists to be able start constructions.

3. 4. Location Selection of Industrial Estates

Location selection of industrial estates is done according to industrial estates law that published in official newspaper on 21st May 2001 and came into practice with 'Regulation of Selection of Industrial Estate'.

As it is mentioned in the previous part , 'Industrial Estate Justification Report', prepared by associations and foundations that want to establish industrial estates, is conveyed to the Ministry of Commerce and Industry. After examining the report, the Ministry of Commerce and Industry make decision whether establishing industrial estate is appropriate. If the Ministry of Industry and Commerce find it convenient, works of location selection of industrial estate begin. The process of location selection can be examined in two phases as 'study phase' and 'location selection phase'.

1- Study phase

In study phase throughout province/ district to be able to establish industrial estate alternative areas are determined. Study phase consists of the parts below.

I- General evaluation of province/ district

II- Threshold analysis

III- Evaluation of alternative areas

IV- Conclusion

I-General evaluation of province/district: About province/district whose study is prepared, indicated information below can be obtained from related associations and stated in the study;

a- geography location, natural structure and state of land use

b- Geological structure

c- Social structure

d- Cultural, historical and natural existences

f- Decisions of planning and urbanization

g- Economic structure

II- Threshold analysis: Threshold analysises are done on evaluation of alternative lands of 1/ 25000 scale and determination of alternative lands , where industrial estates can be established, of 1/100000.

a- threshold analysis of 1/100000 scale: It is done as a result of fitting various information, that obtained from related associations with 1/100000 or 1/25000 scale topographic maps, as assured for province/ district into one another in order to be able determine alternative lands where industrial estates can be established. (Regulation of location selection)

In threshold analysis of 1/100000 scale, lands that are not contained by investment and project lands of any association, have convenient slope and ground for constructions, do not effect wildness life negatively, agriculture lands, olive groves, culture and nature existences with protected (sit) lands, watery lands, lands that have easy transportation with artey connection, have easy way to obtain energy and water , considering two ways have enough distance to settlement centers , suitable to decision of environment plan and implementation plan, are not divided by the main road, have possibility of development and widening, are sufficient size and have convenient places for settlements of residence and industry are all determined by the ministry examining carefully (Regulation of location selection, p. 4).

Doing this determination, information that is to be taken from related association about geological state of the area, underground water, thermal or geothermal water resources, flora and fauna, their living environment, rare and endemic species having danger of dying out , will be taken into consideration. Determining of size of alternative land, probable health protection band is taken into consideration (Regulation of location selection, p.4).

b- Threshold analysis of 1/25000 scales: Alternative lands determined in 1/100000 scales are examined in the place. Threshold analysis of 1/25000 scale is done on lands can be alternative for industrial estate planned to be established and its characteristics are determined according to the titles below.

- Locality
- The distance to city centre and direction
- The distance, direction of other centre of population presented (village, small town . .) around
- Size
- Main road connection and distance

- Ownership state (belongs to national treasury or individuals)
- Cadastral state
- Being in borders of municipality or borders of mücavir alan
- The state according to the environment plan if it is present
- The usage of present land
- The state of surroundings areas regarding present and planning case
- Capability classes of usage of the land
- Slope and direction
- Earthquake zone
- The place where water need can be provided
- The place where energy need can be provided
- Environment for discharge of rain water and wasted water
- According to the direction of dominant wind, the effects to near centre of Population, agriculture lands and water sources.
- Whether it has possibility of improving and widening
- Whether it has suitable place around for side industry settlement and residence
- Location according to protection areas such as special environment protection areas, protecting lands (sit), national parks, natural monuments and areas that has to be protected according to the international agreement
- The state of drainage
- The fact that it can be exposed to flood
- Whether it has geological problem
- Location according to underground and surface water resources
- Location according to solid waste depots areas

III- Evaluation of Alternative Lands and the Result:

Doing an evaluation according to examined alternative land characteristic in 1/ 25000 scale, the most convenient one or a few of the lands are proposed in the result of the report. Afterwards, it is moved into location selection.

In private industrial estates, suggested land as a place of industrial estate is determined whether it is convenient in the result of report.

At the end of analyses stage, if no place can be found or if suggested place has not been found convenient, this case is informed to the governorship in writing and the committee of location selection does not come together.

2-The phase of location selection: 'location selection committee' of 24 establishments is formed in order to examine areas that have been determined in the site analyses report. Determined location selection date, information and maps concerning alternatives areas are beforehand forwarded to these establishments by the Ministry of Commerce and Industry and they are asked to send representatives to 'location selection committee'. (Regulation of location selection p.6)

The chairmanship of the committee is executed by the Ministry of Commerce and Industry. Representatives taking part in the location selection committee gather in order to examine alternative areas in their place on date determined by the ministry and they give opinions on behalf of their own association after doing a search regarding alternative areas.

The committee determine one of the areas as a place of industrial estate. During the committee meeting, a 'location selection report', including the characteristic of the area, sights of the associations and conclusion part, is written. (Regulations of location selection, p.6)

Selection of industrial estate is done by a unanimous vote of members participated in the committee (Regulations of location selection).

If none of the examined areas are found suitable as a place of industrial estate by the committee, this case is determined in the consequence of the report and decision of the committee is notified to related governorship by the Ministry.

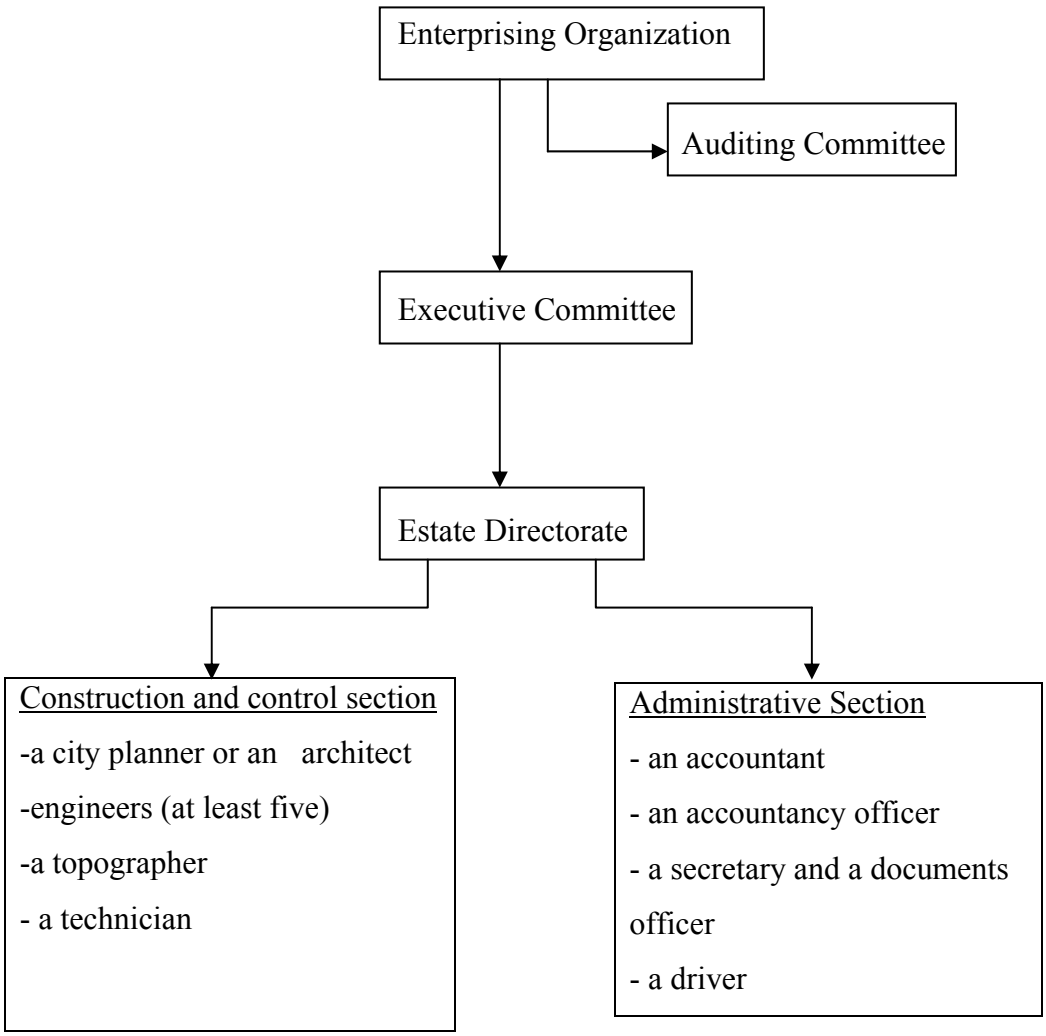
The report of location selection with sights of establishments if there is sent to the ministry later, according to the related notice of general directorate of disaster works, the implementation plan , that will be prepared, should cover geological study report, if specialized industrial estate is in question positive document of evaluation of environmental effect that has been obtained from the environment ministry for the place

chose by the committee, if the land is pasture land , the opinion of the ministry of agriculture and village affairs is evaluated by the ministry . Therefore location and size of industrial estates are determined and proposed to the investment program (Regulation of location selection). Determined suitable location of industrial estate is informed to related governorship.

3. 5. Organization of Management of Industrial Estates in Turkey

Organization of management of industrial estates in Turkey is slightly different from other countries. Management of industrial estates is divided into two periods; construction and managing periods. In construction period , management organs of industrial estate consists representatives whose associations and foundations participated in forming industrial estate and managing period is formed by participants are elected among industrialists .

Figure. 3.1. Organization Scheme of Industrial Estate



It includes at least 15 people

a- Enterprising Organization and General Meeting:

Enterprising organization includes members that participate in forming industrial estate with the chairmanship of governor or assistant of governor, from associations below;

- Province particular management
- Chamber of Industry
- Chamber of Commerce
- Chamber of Industry and Commerce
- Association and cooperative of industrialists
- Members that are chosen by authorized organs of big city municipality and province, district or city municipality in which industrial estate present.

The number that forms enterprising organization can not be less than 11 real, 11 spare and more than 15 real, 15 spare members. (Industrial estate practicing regulations, p.12) Members in enterprising organization are chosen for two years and when their mission ends in which associations and foundations they are representative, their membership ends too.

In enterprising organization, decisions are made with the absolute majority of present. (Industrial estate practicing regulations, p.13)
The main duties and authorities of enterprising organization are;

- To make necessary decisions and take necessary measures in order to materialize the objective of establishing industrial estate,
- To form auditing committees of industrial estate and acquit their works and accounts
- To establish and operate infrastructure and general service foundations required for industrial estate such as electricity, water, sewer system, natural gas, treatment plant, road, communication, sport foundation. Buying from the public institutions and foundations, enterprising organization disperses and sells them. To make decisions on establishing and operating manufacturing foundations and if it is necessary to give the authority to executive committee,
- With decision given on construction and project procurements of infrastructure, social foundations, treatment plants to executive process and have procurement concluded,
- To allot building plot,
- To determine principles of selling prices regarding selling building plot, infrastructure participation shares, electricity, water, natural gas,
- To approve budget and investments programs of industrial estate,
- To approve organization scheme and its staff and if loans are used to put forward for approvement of the ministry,
- To have the money and other sources, belonging to industrial estate, used according to establishment objectives and inspect them,
- If it is necessary to gather ‘general meeting’ in order to transfer its mission to participants of industrial estate and start required process,
- To determine principles about giving license and permission,
- To fulfill its obligations and commitments.

With addition plot if there is, in industrial estate when number of establishments started manufacturing reaches to 1/3 of establishments that will be established, participants are represented in enterprising organization by means of themselves or a member who has authority of representing and convincing.

Duration of service of enterprising organization ends when 2/ 3 of total establishments, that will establish with addition plot if there is in industrial estate, start manufacturing , with documenting opening business certificate or managing certificate or in industrial estates , that costs of establishing industrial estate, obtaining plots in industrial estate and all infrastructure constructions have been done by the loan from the ministry , by documenting that loan debt has been paid, by 'general meeting' coming together in order to select members of executive and auditing committees. In first general meeting whether enterprising organization will continue is discussed and if absolute majority wants enterprising organization to continue, it continues until next general meeting (Industrial estate practicing regulations, p.14)

The first general meeting is invited by enterprising organization; the followings are invited by executive committee. By doing general meeting, missions and authorities of enterprising organization pass to general meeting. (industrial estate practicing regulations, p.14)

b) Executive Committee:

Industrial estates are represented by the chairman of executive committee or assistant of the chairman.

Executive committee consists of 5 real, 5 spare members including at least 4 of enterprising organization members.

Members of executive committee are chosen for two years.

The main duties and authorities of executive committee are;

- To represent and be commitment for industrial estate,
- To executive managing and dispatch of industrial estate according to enterprising organization,
- In order for industrial estate to improve ideally, it takes any kind of measures, plans and makes fairly decisions on operating.

- To prepare annual activity report, budge certain calculation and balance sheet and present for approvement to enterprising organization,
- To put managing membership fees, infrastructure participation shares and rent and selling price of properties into practice according to principals that enterprising organization determines,
- To sell lands of building according to principles that enterprising organization determines,
- To have prepared present map, implementation plan, subdividing plan and infrastructure projects with investigation and procurement files that belong to manufacturing works and do these procurements according to decision of enterprising organization,
- To establish and operate infrastructure and general service foundations required for industrial estate such as electricity, water, sewer system, natural gas, treatment plant, road, communication, sport foundation. Buying from the public institutions and foundations, enterprising organizations disperses and sells them. Regarding make decisions on establishing and operating manufacturing foundations, it makes decisions and put into practice with the authority given by enterprising organization,
- To give license and permission according to principles determined by enterprising organization,
- To decide on appointment and dismissing of region directorate staff except region manager,
- To carry out plan, principle and programs given by enterprising organization and do other duties,
- To solve conflicts among participants in industrial estate or participants and region directorate, resort to enterprising organization for unsolved problems,
-To examine and conclude transfer requests of participants who have permission of usage of building and operating certificate or opening business permission. (Industrial estate practicing regulations, p.22)

c) Auditing Committee:

Auditing committee consists of two real, two spare members that enterprising organization choose among its members. Members of auditing committee are chosen for two years (Industrial estate practicing regulations, p.23)

The main duties and authorities of auditing committee are;

- To examine registers at least once in three months in order to obtain information about operation of industrial estate and keep registers systematically and inform enterprising organization by a report,
- To inspect budge, balance sheet, and income – expense lists,
- To examine complaints participants have made about staff and members of executive committee in industrial estate and inform the result of the examination to enterprising organization,
- Examining annual balance sheet and result calculations, it states its opinion and informs enterprising organization by a report,

In conclusion, members of auditing committee informs enterprising organization on defects they see in work operation and members who are accountable in enterprising organization are responsible to inform the ministry. (Industrial estate practicing regulations, p.24)

d) Estate Directorate:

Estate directorate consists of an estate director and administrative and technical staff. Estate directorate is appointed by the decision of enterprising organization, other staff is appointed with proposal of estate director and decision of executive committee and in the same way they are dismissed. (Industrial estate practicing regulations, p.25)

The mission of estate directorate is to executive management and sending of industrial estate according to instructions and decisions of executive committee and enterprising organization. So during construction managing estate directorate has a great deal of mission and commitments. (Industrial estate practicing regulations, p.26)

3. 6. Financing of Industrial Estates in Turkey

Financing of industrial estates in Turkey on a large scale is provided from 'industrial estates and small industry sites fund' a source originated from general budget. With requirement of enterprising organization, the ministry of commerce and industry, according to development level of area where industrial estate is present, provides loan of 90 % to 99 % of the project from this fund. The rest of the project is covered from participation share of enterprising organization. Participation share that enterprising

organization should cover,has to be invested at Halk Bank; otherwise the ministry does not allow the money to be used.

Construction of infrastructure in industrial estates, buying and expropriating the land, and conditions of loan that are given from budget source to enterprising organization for construction of social foundations are according to development of regions as it fallows;

Table 3.1. Loan that will be given for construction of infrastructure with rate of interest and paying back conditions and land allotment with selling conditions

Developed Provinces (*)		**Normal Provinces**			**I.Degree Regions Having Priority on Development**	
Participation of the ministry % 90 **Rate of interest** % 20 **Paying back** 2 years without payment + 7 years Total : 9 years (*)İstanbul, Kocaeli and inside frontiers of Adana, Ankara, Antalya, Bursa and İzmir big city municipalities are developed regions.	**Provinces** Adana Ankara Antalya Bursa İstanbul İzmir Kocaeli	**Participation of the ministry** % 95 **Rate of interest** % 15 **Paying back** Three years without payment +8 years Total : 11 years	**I.Group** **Name of province** Adana(*) Ankara(*) Antalya(*) Aydın Balıkesir Bilecik Bolu Bursa(*) Denizli Edirne Eskişehir Gaziantep Isparta İçel İzmir(*) Kayseri Kırklareli Konya Manisa Muğla Sakarya Tekirdağ Yalova Düzce (*) outside frontiers of big cities municipalities is normal region	**II.Group** **Name of province** Afyon Burdur Çanakkale(*) Hatay Kütahya Uşak (*) Except Bozcaada and Gökçeada provinces	**Participation of the ministry** % 99 **Rate of interest** % 10 **Paying back** 5 years without payment + 10 years Total : 15 years	**Provinces** Adıyaman Ağrı Amasya Ardahan Artvin Bartın Batman Bayburt Bingöl Bitlis Çanakkale (Bozcada ve Gökçeada) Çankırı Çorum Diyarbakır Elazığ Erzincan Erzurum Gümüşhane Hakkari Iğdır K.Maraş Karabük Kars Kastamonu Kilis Malatya Mardin Muş Siirt Sinop Sivas Şanlıurfa Şırnak Tokat Tunceli Van Yozgat Zonguldak Osmaniye Aksaray Girusun Karaman Kırıkkale Kırşehir Niğde Ordu Rize Nevşehir Trabzon Samsun

Source: www.sanayi.gov.tr

This fund has come into existence from appropriations that have been put into the budget of the ministry of industry and commerce since 1965, and it is gathered at Turkey Halk Bank with the command of the same ministry. In addition to the appropriations, interests that are determined by Turkey Halk Bank and are paid by people have taken loan from fund and back payments are collected in the fund.

During the construction of industrial estate other sources from which enterprising organization benefits are; first land and infrastructure participation shares that are paid by industrialists-members who will act in industrial estate. Land and infrastructure participation shares are determined by enterprising organization according to size of plot of land apart from expenditures of managing treatment plant. Second, the price of prepared files for procurements of industrial estate infrastructure and social foundations. Finally, the interests from collected money.

Incomes in period of managing industrial estates;

- Prices of confirmation and visas for projects of establishments that will be established in estate,
- Management membership fees,
- Water, electricity, natural gas, social foundation, treatment plant and similar managing incomes and participation incomes,
- Incomes from buying plot of lands,
- Donations,
- rent and service incomes from region shared properties,
- Penalties of delay,
- Investments of bank,
- Incomes from advertisements,
- Other incomes (Law: 4562)

Chapter 4

EVALUATION OF INDUSTRIAL ESTATE POLICY IN TURKEY

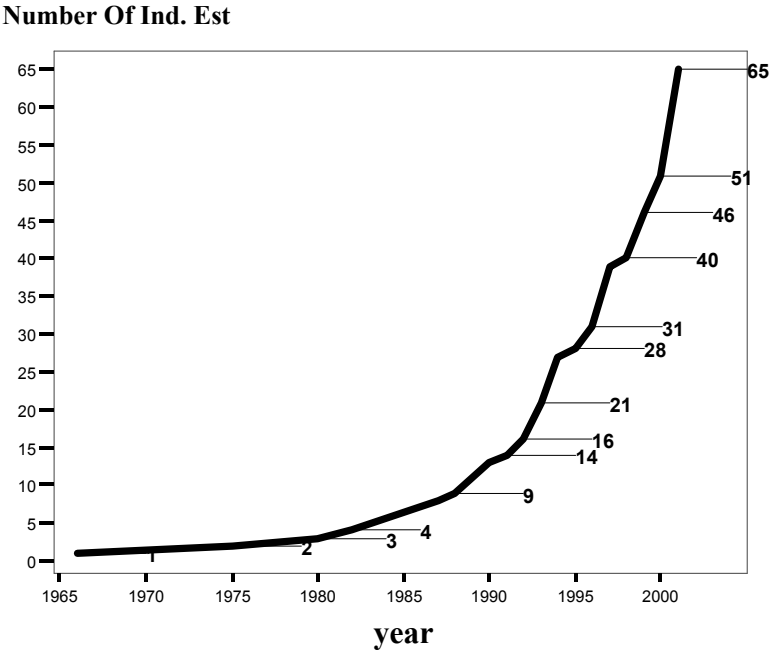
4. 1. State of Practicing Industrial Estate of Today

Starting in 1962 in Bursa, practicing industrial estate reached 16139 hectare and 65 units until 2002 in 40 years and presented to industrialists.

According to investment program of the Ministry of Industry and Commerce, 117 industrial estates of which construction of infrastructure are going on, are on the stage of construction and 85 industrial estates that are on site analyses stage, are being established.

Examining increase trend of completed industrial estates between 1962-2002; there is very little increase can be seen between 1962-1987, after 1987 a very great increase can be seen on completed industrial estates. Six of the completed estates had been completed during the first 25 years of implementation (1962-1987). The rest-59 was completed industrial estates completed during the last 15 years. Graph 4.1. is indicating the improvement trend of the completed industrial estates.

Graph 4.1. Improvement Trend of Completed Industrial



Source:The ministery of Industry and Commerce

4. 1. 2. Regional and Provincial Distribution of Industrial Estates

When the regional distribution of completed estates is evaluated; it is seen that most of the estates completed are existing in the western part of the country.

Looking at distribution of 65 completed industrial estates; the Middle Anatolia Region is the most industrial estates established region. After this region Aegean with 11 industrial estates, Marmara with 10 industrial estates, the Mediterranean and the Black Sea with 10 industrial estates each, South-eastern Anatolia Region with 7 industrial estates and Eastern Anatolia Region fallow with 5 industrial estates. Taking province numbers into consideration, Aegean Region with 11 industrial estates among 8 provinces has the highest; Eastern Anatolia Region with 5 industrial estates among 14 provinces has the lowest number of industrial estates. Looking at regional distribution on open space in completed industrial estates, is seen that the sequence above changes. Marmara region has the largest open space with 3582 hectare (22, 19 % of overall completed space in Turkey). Marmara Region is fallowed by Interior Anatolia Region with 3288 ha (20, 37 %), Aegean Region with 3012 ha (18, 66 %), Mediterranean with 2275 ha (14, 11 %), Southeast Anatolia with 2126 ha (13, 17 %), Eastern Anatolia 948 ha (5, 87 %). And the Black Sea Region has the least open space with 905 ha (5, 61 %).

Comparing to other regions it can be said from two different sequences that space of industrial estates in Marmara region is bigger, on contrary in the Black Sea Region is smaller.

Examining regional distribution of industrial estates in stage of construction and site analyses, 2002 industrial estates that are on stage of construction and site analyses; 47 (23, 27 %) in Aegean Region, 42 (20, 79 %) in Marmara, 39 (19, 31 %) in the Black Sea Region, 35 (17, 33 %) in Interior Anatolia Region, 18 (8, 91 %) in Eastern Anatolia, 12 (5, 94 %) in Mediterranean, and 9 (4, 46 %) in Southeast Anatolia were decided to be established.

Looking at regional distribution of industrial estates in stage of construction, with 9808 ha Interior Anatolia Region (30,96% of overall industrial estates in stage of construction in Turkey) has the largest space of industrial estates in stage of construction. Interior

Anatolia Region is fallowed by Aegean Region with 5356 ha (16,91%), Marmara with 5272ha (16,64%), the Black Sea Region with 4659ha (14,71%), Southeast Anatolia with 3127ha (9,87%), Eastern Anatolia with 2315 ha (7,31%), and Mediterranean Region with 1145 ha (3,61 %).

Table 4.1. Regional Distribution of Industrial Estates

NAME OF REGIONS	COMPLETED BY THE END OF 2002			PRESENT IN THE INVESTMENT PROGRAM OF 2002				
	NUMBER	SIZE (Ha)	% Hectar (*)	NUMBER of Ind. Est. (**)	SIZE (Ha)	% Hectar	SIZE (***)	% NUMBER of Ind. Est. (****)
MARMARA (11 PROVINCES)	10	3. 582	22, 19	22	5. 272	16, 64	42	20, 79
AEGEAN (8 PROVINCES)	11	3. 012	18, 66	20	5. 356	16, 91	47	23, 27
MEDITERRANEAN (8 PROVINCES)	9	2. 278	14, 11	8	1. 145	3, 61	12	5, 94
INTERIOR ANATOLIA (13 PROVINCES) (*)	14	3. 288	20, 37	20	9. 808	30, 96	35	17, 33
BLACK SEA (18 PROVINCES)	9	905	5, 61	28	4. 659	14, 71	39	19, 31
EASTERN ANATOLIA (14 PROVINCES)	5	948	5, 87	12	2. 315	7, 31	18	8, 91
SOUTHEAST ANATOLIA (9 PROVINCES)	7	2. 126	13, 17	7	3. 127	9, 87	9	4, 46
TOTAL IN TURKEY (81 PROVINCES)	**65**	**16. 139**	**100**	**117**	**31. 682**	**100**	**202**	**100**

(*) İVEDİK consists of very small pots (7800)
(**) the number of industrial estates on construction statge
(***)Projects with the site analyse characteristic are included in total of construction stage
(****)The rate of total units to total units of Turkey
Source:The Ministry of Industry and Commerce

When distribution of completed industrial estates according to provinces is examined, İstanbul has the largest space of industrial estate with completed 1490 ha (4 industrial estates) industrial estate. İstanbul is fallowed by Antep with 1300 ha (3 industrial estates) and Ankara with 1127 ha (3 industrial estates).

With the distribution of industrial estates on construction stage, Eskişehir has the largest industrial estate space on construction stage with 2850 ha (2 industrial estates), Kayseri is second with 2125 ha (4 industrial estates), and İzmir is the third with 1852 ha (5 industrial estates).

Looking at provinces distribution of industrial estates that are in construction and site analyses stages and completed overall, İzmir is the city in which taken decision of establishing industrial estate is the most. İzmir is fallowed by Kocaeli and Konya with decision of establishing 12 industrial estates.

From the table below it can be seen that the politics of 'for each province at least an industrial estate' is being tried to be fulfilled. In addition to this, a decision has been taken to establish industrial estates especially in Marmara, Aegean and Interior Anatolia Region. In other words, it has been decided to establish only an industrial estate in undeveloped regions East Anatolia Region, Southeast Anatolia Region and Blacksea Region.

However, no attempt and demand have been made in order to establish industrial estate except in Artvin.

Table 4.2. Distribution As to Provinces

	completed		**On costruction**			**Number in total**
Name of province	**number**	**size (Ha)**	**number**	**size (Ha)**	**analysis**	
Adana	2	1. 100	1	170	-	3
Adıyaman	1	150	-	-	-	1
Afyon	1	275	1	150	7	9
Ağrı	-	-	1	100	-	1
Amasya	1	75	1	118	2	4
Ankara	3	1. 127	4	1. 275	2	9
Antalya	1	196	1	175	1	3
Artvin	-	-	-	-	-	-
Aydın	1	150	2	630	4	7
Balıkesir	-	-	4	900	-	4
Bilecik	1	150	5	1. 080	-	6
Bingöl	-	-	1	80	-	1
Bitlis	-	-	-	-	1	1
Bolu	1	60	5	510	-	6

Burdur	1	70	1	90	-	2
Bursa	4	1. 122	1	167	4	9
Çanakkale	-	-	2	200	-	2
Çankırı	1	110	-	-	1	2
Çorum	1	260	2	661	-	3
Denizli	2	722	3	925	-	5
Diyarbakır	-	-	1	523	-	1
Edirne	-	-	2	460	-	2
Elazığ	2	200	2	210	1	5
Erzincan	1	348	-	-	-	1
Erzurum	1	100	1	380	1	3
Eskişehir	2	290	2	2850	2	6
Gaziantep	3	1300	2	1270	-	5
Giresun	-	-	1	70	-	1
Gümüşhane	-	-	1	75	-	1
Hakkari	-	-	1	45	-	1
Hatay	1	180	2	250	-	3
Isparta	1	252	1	60	1	3
İçel	2	380	1	100	1	4
İstanbul	3	1490	-	-	3	6
İzmir	2	800	5	1882	13	20
Kars	-	-	1	200	1	2
Kastamonu	-	-	1	100	1	2
Kayseri	1	600	4	2. 125	1	6
Kırklareli	-	-	1	400	-	1
Kırşehir	1	200	-	-	1	2
Kocaeli	1	230	1	250	10	12
Konya	3	550	4	1150	4	11
Kütahya	1	170	1	250	2	4
Malatya	1	300	1	350	1	3
Manisa	3	535	3	582	1	7
K. Maraş	-	-	1	300	-	1

Mardin	1	300	-	-	-	1
Muğla	-	-	2	437	1	3
Muş	-	-	1	300	-	1
Nevşehir	-	-	-	-	2	2
Niğde	1	261	1	292	-	2
Ordu	1	60	1	100	1	3
Rize	-	-	-	-	1	1
Sakarya	-	-	2	575	1	3
Samsun	1	150	2	354	1	4
Siirt	-	-	1	100	-	1
Sinop	1	100	2	176	-	3
Sivas	-	-	2	1030	1	3
Tekirdağ	1	440	4	1240	1	6
Tokat	1	50	4	655	1	6
Trabzon	1	100	-	-	2	3
Tunceli	-	-	1	100	-	1
Şanlıurfa	1	286	1	1134	-	2
Uşak	1	360	2	500	-	3
Van	-	-	1	200	-	1
Yozgat	1	150	-	-	-	1
Zonguldak	-	-	5	1040	1	6
Aksaray	-	-	1	286	1	2
Bayburt	-	-	1	500	-	1
Karaman	-	-	1	400	-	1
Kırıkkale	1	150	1	400	-	2
Batman	-	-	1	100	-	1
Şırnak	-	-	-	-	2	2
Bartın	1	50	-	-	1	2
Ardahan	-	-	1	150	-	1
Iğdır	-	-	1	200	-	1
Yalova	-	-	-	-	1	1
Karabük	-	-	1	100	-	1

Kilis	1	90	1	-	-	2
Osmaniye	1	100	-	-	1	2
Düzce	-	-	1	200	-	1
TOTAL	65	16. 139	117 (*)	31. 682	85	267

(*) 8 projects of treatment plats are not included in the table

Source:The Ministry of Industry and Commerce

4. 1. 3. Completion Times

Completing industrial estate in short time and present it to industrialists is valuable in success of politics of industrial estates. If completion times last long the costs of infrastructure and investments of industrialists who desire to run establishment as soon as possible increase which effects the economy negatively. When these delays last long, either the industrialist gives up making investment or establishes his establishment in the city or suburbs unconventionally. These untidy and unsystematically industry establishments form industrial areas that may cause pollution, loss of agricultural areas and develop the city to unwanted direction.

Industrial estates should be completed and presented to industrialists short time after location selections have been done according to industrial estate politics of the government and demands of the industrialist as a land supplier tools.

Completion times of 65 completed industrial estates vary from 1 to 19 years in Turkey. The average completion time is 15 years which could be achieved as a long amount of estate projects completed in time periods. Most of industrial estates are completed in 10-14 years although only 8 industrial estates have been completed in 1-4 years.

Table 4.3. Construction Time and Number of Industrial Estates

Construction time of industrial estates-year	**Number of industrial estates**
1-4	8
5-9	22
10-14	23
15-19	12

Completion time last long particularly for industrial estates in which the ministry loan is used. However, this time changes from 1 to 8 years in industrial estates that are established by possibility of enterprising organization. The average completion time in these industrial estates is 4,2 years. The number of industrial estates that have been provided by finance of enterprising organization are only 10. These industrial estates and their completion time ; Adana Centre II- 8 years, Denizli Ö. Sabancı (Çardak) -1 year, Gaziantep III-6 years, İstanbul-Ümraniye (Dudulu)-5 years, Ankara Center IV (ostim)-3 years, Kocaeli Gebze I- 6 years, Konya Ereğli-3 years, Manisa II-6 years, Mersin II-1 year, and Manisa III-3 years.

There are two main reasons for completion times to be that long. First, since the insufficient fund that is formed by the ministry of industry and commerce is shared with other industrial estates, no sufficient source can be transferred to industrial estates. Therefore construction of infrastructure and expropriation last long. Second, since the process of location selection, establishment and expropriation of industrial estates last long, enterprising organization starts construction of infrastructure late. With legalizing industrial estate law, completion times is expected to get shorter.

Table 4.4. Start-Finish Date of Construction of Completed Industrial Estates

THE NAME OF ESTATE	Start-Finish Date	Time of Completion
Adana I	1977-1996	19
Adana Ii	1993-2001	8
Adiyaman I	1991-2001	10
Afyon I	1981-1994	13
Amasya I	1993-2001	8
Ankara I	1978-1991	13
Ankara-İvedik(Oksb)	1991-2001	10
Ankara-Ostim	1998-2001	3
Antalya I	1976-1994	18
Aydin	1985-1996	11
Bilecik I	1977-1993	16
Bolu I	1977-1993	16
Burdur I	1982-1996	14
Bursa-M. K. Paşa	1991-1999	8
Bursa	1962-1966	4
Bursa -İnegöl I	1977-1987	10
Bursa-Demirtaş	1990-2001	11
Çankiri-Korgun	1981-1997	16

Çorum I	1977-1995	18
Denizli	1976-1990	14
Denizli-Çardak	1997-1997	1
Elaziğ I	1985-1990	5
Elaziğ Ii	1993-2001	8
Erzincan	1990-2001	11
Erzurum I	1974-1982	8
Eskişehir I	1973-1983	10
Eskişehir Ii	1979-1987	8
Gaziantep I	1971-1988	17
Gaziantep Ii	1987-1998	11
Gaziantep Iii	1994-2000	6
Hatay-İskenderun I	1983-1990	7
Mersin-Tarsus I	1986-1997	11
Mersin-Tarsus Ii	1997-1999	2
Isparta I (S. Demirel)	1992-1999	7
İstanbul (Deri)	1983-1994	11
İstanbul-İkitelli Oksb (**)	1990-2000	10
İstanbul-Ümraniye(Dudullu)	1995-2000	5
İzmir - Atatürk	1980-1992	12
İzmir-Menemen(Deri)	1988-1997	9
Kayseri I	1977-1990	13
Kirşehir	1990-2001	11
Kocaeli-Gebze I (***)	1986-1992	6
Konya I	1971-1980	9
Konya Ii	1977-1994	17
Konya-Ereğli	1998-2001	3
Kütahya I	1995-1999	4
Malatya I	1976-1993	17
Manisa I	1971-1975	4
Manisa Ii	1987-1993	6
Manisa Iii (Tevsi)	1998-2001	3
Mardin	1976-1994	18
Niğde	1984-1997	13
Ordu	1990-2001	11
Samsun	1982-1997	15
Sinop I	1991-2001	10
Şanliurfa I	1991-1999	8
Tekirdağ-Çerkezköy I	1975-1987	12
Tokat I	1978-1993	15
Trabzon-Arsin	1985-1997	12
Uşak I	1985-1994	9
Yozgat	1990-1997	7
Kirikkale	1991-2000	9
Kilis	1991-2000	9
Bartin I	1994-1999	5
Osmaniye	1994-2001	7

Source:The Ministry of Industry and Commerce

Table 4.5. Start-Suggested Finish Date of Industrial Estates on Construction Stage

THE NAME OF ESTATE	Start –suggested finish date	Time of Completion
Adana-Kozan	1999-2005	6
Afyon-İscehisar (Mermerciler)	1999-2005	6
Ağri	1998-2004	6
Amasya-Merzifon	1991-2002	11
Ankara-Polatli	1995-2005	10
Ankara II (Türkobasi)	1998-2006	8
Ankara I (Tevsi)	1998-2004	6
Ankara Ş. Koçhisar Osb	1998-2006	8
Antalya II	1998-2002	4
Aydin-Astim	1998-2004	6
Aydin-Ortaklar	1998-2004	6
Balikesir	1986-2003	17
Balikesir-Bandirma	1993-2002	9
Balikesir-Gönen(Deri)	1994-2005	11
Balikesir-Haddeciler (I. Etap)	1998-2004	6
Bilecik II	1994-2003	9
Bilecik-Söğüt	1999-2005	6
Bilecik-Bozüyük	1998-2005	7
Bilecik-Pazaryeri	1998-2004	6
Bilecik-Osmaneli	1998-2004	6
Bingöl	1991-2002	11
Bolu II (Tevsi)	1999-2004	5
Bolu-Yeniçağa	1999-2004	5
Bolu-Gerede I	1993-2002	9
Bolu-Gerede II (Tevsi)	1999-2004	5
Bolu-Gerede (Deri)	1997-2006	9
Burdur-Bucak	1999-2004	5
Bursa (Deri)	1994-2006	12
Çanakkale	1991-2002	11
Çanakkale-Biga	1998-2002	4
Çorum II	1998-2005	7
Çorum-Sungurlu	1998-2006	8
Denizli-Merkez (Deri)	1999-2006	7
Denizli-Tavas	1999-2006	7
Denizli-Acipayam (Yumrutaş)	1999-2006	7
Diyarbakir	1991-2002	11
Edirne	1994-2003	9
Edirne-Keşan	1999-2005	6
Elaziğ-Hayvan Ve Hay. Ürün.	1998-2003	5
Elaziğ III (Tevsi)	1999-2005	6
Erzurum II	1998-2006	8
Eskişehir III	1994-2005	11
Eskişehir IV	1998-2005	7
Gaziantep IV	1998-2005	7

Gaziantep-Nizip	1997-2004	7
Giresun	1990-2003	13
Gümüşhane-Merkez	1998-2004	6
Hakkari	1991-2004	13
Hatay-Antakya	1993-2003	10
Hatay-Payas	1998-2004	6
Isparta (Deri)	1993-2004	11
İçel-Silifke	1999-2004	5
İzmir-K. Paşa I	2000-2004	4
İzmir-Tire	1993-2004	11
İzmir-Ödemiş	1994-2005	11
İzmir-Kinik	1996-2003	7
İzmir-Aliağa I	1998-2004	6
İzmir-Bergama	1996-2005	9
Kars	1976-2002	26
Kastamonu	1993-2003	10
Kayseri-İncesu	1998-2006	8
Kayseri II (Mimar Sinan)	1998-2004	6
Kayseri-Hacilar	1998-2006	8
Kayseri-Develi	1999-2005	6
Kirklareli	1991-2002	11
Kocaeli- (Tosb-Taysad)	1992-2003	11
Konya III	1998-2006	8
Konya-Akşehir	1999-2004	5
Konya-Beyşehir	1999-2004	5
Konya-Çumra	1997-2004	7
Kütahya-Gediz	1999-2005	6
Malatya II	1998-2005	7
Manisa-Akhisar	1991-2004	13
Manisa-Turgutlu	1998-2005	7
Manisa-Salihli	1998-2004	6
Kahramanmaraş	1990-2003	13
Muğla	1993-2006	13
Muğla-Milas	1999-2004	5
Muş	1999-2006	7
Niğde-Bor (Aritma Dahil)	1992-2005	13
Ordu-Fatsa	1999-2004	5
Sakarya I (**)	1984-2003	19
Sakarya II	1998-2005	7
Sakarya III	1998-2004	6
Samsun-Kavak	1993-2004	11
Samsun-Bafra (Borsab)	1999-2005	6
Siirt	1991-2003	12
Sinop-Boyabat	1998-2004	6
Sinop II (Tevsi)	1998-2004	6
Sivas I	1990-2002	12
Sivas II	1998-2005	7

Tekirdağ-Çerkezköy II	1991-2003	12
Tekirdağ-Hayrabolu	1994-2004	10
Tekirdağ-Çorlu (Deri)	1996-2005	9
Tekirdağ-Malkara	1998-2004	6
Tokat II	1993-2002	9
Tokat-Turhal	1999-2005	6
Tokat-Niksar	1999-2005	6
Tokat-Erbaa	1999-2005	6
Tunceli	1991-2002	11
Şanliurfa II	1998-2005	7
Uşak (Deri)	1990-2002	12
Uşak II (Tevsi)	1999-2005	6
Van	1998-2005	7
Zonguldak-Çaycuma I	1991-2002	11
Zonguldak-Çaycuma II (Tevsi)	1997-2004	7
Zonguldak-Ereğli	1994-2004	10
Zonguldak-Alapli	1997-2004	7
Zonguldak Osb	1998-2005	7
Aksaray	1987-2002	15
Bayburt	1998-2006	8
Karaman	1990-2002	12
Kirikkale Keskin	1998-2005	7
Batman	1991-2004	13
Ardahan	1999-2005	6
Iğdir Osb	1997-2005	8
Karabük	1993-2002	9
Düzce	1994-2004	10

Source:The Ministry of Industry and Commerce

4. 1. 4. Cost of Investment

According to data of the Ministry of Industry and Commerce, for completed projects of industrial estates with constant price in 2002 487, 1 trillion loan were used (www. sanayi. gov. tr)

The cost of projects of 117 industrial estates of which projects were going on and 85 industrial estates that were in the stage of site analyses project present in the 2002 investment program of the Ministry of Industry is 470, 9 trillion TL (with constant price in 2002) . For these projects until the end of 2001 with price of 2002 177, 7 trillion TL loans were used. These loans include expropriation, construction of infrastructure and social buildings and general expenditures. The buildings of factories are being constructed by the industrialists.

Nine of completed industrial estates were constructed by the sources of enterprising committee itself without using any loans from the ministry of industry and commerce.

Table 4.6. Cost of Industrial Estates Investment

THE NAME OF ESTATE	SIZE (Ha)	Total investment cost (in 2002 Price) TL	Per hectare cost (in 2002 Price) TL
Denizli	400	5. 955. 790. 000. 000	14. 889. 475. 000
Bursa-M. K. Paşa	197	3. 052. 630. 000. 000	15. 495. 583. 756
Uşak I	360	5. 810. 530. 000. 000	16. 140. 361. 111
Afyon I	275	4. 578. 500. 000. 000	16. 649. 090. 909
Kilis	90	1. 503. 030. 000. 000	16. 700. 333. 333
Gaziantep I	260	4. 461. 050. 000. 000	17. 157. 884. 615
Aydin	150	2. 930. 500. 000. 000	19. 536. 666. 667
Yozgat	150	3. 286. 870. 000. 000	21. 912. 466. 667
Osmaniye	100	2. 214. 140. 000. 000	22. 141. 400. 000
Konya I	150	3. 578. 950. 000. 000	23. 859. 666. 667
Kütahya I	170	4. 150. 530. 000. 000	24. 414. 882. 353
Kayseri I	600	16. 502. 100. 000. 000	27. 503. 500. 000
Adiyaman I	150	4. 197. 000. 000. 000	27. 980. 000. 000
Niğde	261	7. 324. 210. 000. 000	28. 062. 107. 280
Isparta I (S. Demirel)	252	7. 195. 790. 000. 000	28. 554. 722. 222
Elaziğ I	100	2. 916. 330. 000. 000	29. 163. 300. 000
Şanliurfa I	286	8. 790. 910. 000. 000	30. 737. 447. 552
Hatay-İskenderun I	180	5. 777. 890. 000. 000	32. 099. 388. 889
Kirikkale	150	4. 821. 210. 000. 000	32. 141. 400. 000
Sinop I	100	3. 292. 930. 000. 000	32. 929. 300. 000
Malatya I	300	10. 032. 650. 000. 000	33. 442. 166. 667
Amasya I	75	2. 651. 500. 000. 000	35. 353. 333. 333
Konya Ii	300	10. 711. 580. 000. 000	35. 705. 266. 667
Elaziğ Ii	100	3. 570. 700. 000. 000	35. 707. 000. 000
Antalya I	196	7. 205. 500. 000. 000	36. 762. 755. 102
Erzincan	348	14. 028. 280. 000. 000	40. 311. 149. 425
Burdur I	70	2. 927. 550. 000. 000	41. 822. 142. 857
Erzurum I	100	4. 282. 650. 000. 000	42. 826. 500. 000
Manisa I	150	6. 584. 210. 000. 000	43. 894. 733. 333
Ankara I	400	17. 708. 800. 000. 000	44. 272. 000. 000
Eskişehir I+Ii	290	12. 991. 580. 000. 000	44. 798. 551. 724
Mardin	300	14. 283. 840. 000. 000	47. 612. 800. 000
Tekirdağ-Çerkezköy I	440	21. 467. 370. 000. 000	48. 789. 477. 273
Çorum I	260	12. 715. 300. 000. 000	48. 905. 000. 000
Gaziantep Ii	500	24. 469. 470. 000. 000	48. 938. 940. 000
Mersin-Tarsus I	100	4. 975. 790. 000. 000	49. 757. 900. 000
Kirşehir	200	10. 272. 720. 000. 000	51. 363. 600. 000
İzmir - Atatürk	600	31. 460. 000. 000. 000	52. 433. 333. 333
Bursa -İnegöl I	300	16. 420. 000. 000. 000	54. 733. 333. 333
Çankiri-Korgun	110	6. 027. 370. 000. 000	54. 794. 272. 727
Bartin I	50	3. 145. 450. 000. 000	62. 909. 000. 000

Adana I	500	33. 897. 000. 000. 000	67. 794. 000. 000
İzmir-Menemen(Deri)	200	14. 483. 330. 000. 000	72. 416. 650. 000
Tokat I	50	3. 911. 220. 000. 000	78. 224. 400. 000
Bilecik I	150	11. 957. 100. 000. 000	79. 714. 000. 000
Bolu I	60	5. 031. 570. 000. 000	83. 859. 500. 000
Trabzon-Arsin	100	9. 228. 420. 000. 000	92. 284. 200. 000
Samsun	150	16. 484. 210. 000. 000	109. 894. 733. 333
İstanbul (Deri)	240	40. 517. 770. 000. 000	168. 824. 041. 667
Ordu	60	11. 478. 790. 000. 000	191. 313. 166. 667
Adana Ii*	600		
Ankara-İvedik(Oksb)**	477		
Ankara-Ostim *	250		
Bursa*	150		
Bursa-Demirtaş**	475		
Denizli-Çardak*	322		
Gaziantep Iii*	540		
İstanbul-İkitelli Oksb***	800		
İstanbul-Ümraniye(Dudullu)*	450		
Kocaeli-Gebze I*	230		
Konya-Ereğli*	100		
Manisa Ii*	200		
Manisa Iii (Tevsi)*	185		
Mersin-Tarsus Ii*	280		

(*) industrial estates of which investment cost covered by enterprising committee.
(**)Sanayi bölgesi olarak gelişmiş bölge daha sonra OSB hüviyetini kazanmıştır.
(***)they were provided loan only for work on the protocol.
Source:The Ministry of Industry and Commerce

In industrial estates that the loan of the Ministry of Industry and Commerce were used, approximately per hectare costed 47,550538 billion TL with constant price in 2002. The least cost of investment per hectare is Denizli industrial estate with 14,889475 Billion TL/ha. Denizli is fallowed by Bursa Mustafa Kemal Paşa industrial estate with 15,495583 BillionTL/ha, Uşak industrial estate with 16,140361 Billion TL/ha, Afyon industrial estate with 16,649091 BillionTL/ha. Investment costs of established industrial estate in Aegean Region is less comparing to other regions.

Industrial estate that has the highest investment cost is Ordu industrial estate with 191,313 167 BillionTL/ha. It is fallowed by İstanbul leather industrial estate with 168,824042 BillionTL /ha, Samsun industrial estate with 109, 894733 BillionTL/ha, Trabzon-Arsin with 92,284200 BillionTL/ha and Bolu industrial estate with 83,859500 BillionTL/ha. Four of five completed industrial estates that have the highest investment costs are in Black Sea Region. For Black Sea Region geographically being on an

inclined land is one of the most important factors that increase the investment costs. And also because of the same reason infrastructure costs increase too.

4. 1. 5. Size of Industrial Estates

Completed 65 industrial estate cover totally 16139 hectares. The average size is 248,3 hectares. The size of these industrial estates changes between 50-800 hectares. The size of most of completed industrial estates is 51-300 hectares.

117 industrial estates that are in the stage of construction cover 31682 hectares. The average is 275,57 hectares. Comparing to completed industrial estates, the average size of industrial estates that are in construction stage increased for 27,27 ha. The size of industrial estates that are in the stage of construction changes between 20 and 1850 hectares. Frequency on sizes indicates that majority of estate cover an area between 50 and 300 hectares. Table.3.5. is indicating the areas covered industrial estates that completed and in the stage of construction

Table 4.7.Size Scale of Industrial Estates

Size Scale (Ha)	Number of completed industrial estates	Industrial estates in construction stage	Number of industrial estates in total
0-50	2	2	4
51-100	14	32	46
101-150	10	18	28
151-200	9	18	27
201-300	14	19	33
301-400	5	7	12
401-500	6	6	12
501-600	4	6	10
601-700	-	1	1
701-800	1	1	2
801-900	-	1	1
901-1000	-	3	3
1000+	-	3	3

Source:The Ministry of Industry and Commerce

4. 1. 6. Optimal Size of Industrial Estates in Turkey

The most important reason for industrialists to establish their establishments in industrial estates is to benefit from scale economies and agglomeration economies. Thus investment costs of infrastructure of industry establishments decrease. Since industrialists themselves can not establish many establishments, they come together in order to establish them and make use of them. For the maximization of these advantages, in pre-planning process feasibility and analysis studies should be done in order to determine optimum size industrial estate.

In Turkey, the size of industrial estates changes between 20-1850 hectares. Since determination of size of industrial estates is done spontaneously, so many different sizes of industrial estates came out.

In Turkey, examining the size of completed industrial estates, built by loan of the Ministry of Industry and Commerce, comparing to costs of infrastructure; the size of industrial estates having the highest cost are industrial estates that are 0-50 hectares. In these industrial estates the average cost of investment is 70,57 billion TL / ha. The size of industrial estate that has the least investment costs is 377 ha. In these size of industrial estates investment costs is 28. 84 billion TL/ha. When the size of industrial estates enlarges more than 377 ha, investment costs start to increase again. Tablo3.6. is indicating the optimal size of industrial estates in Turkey

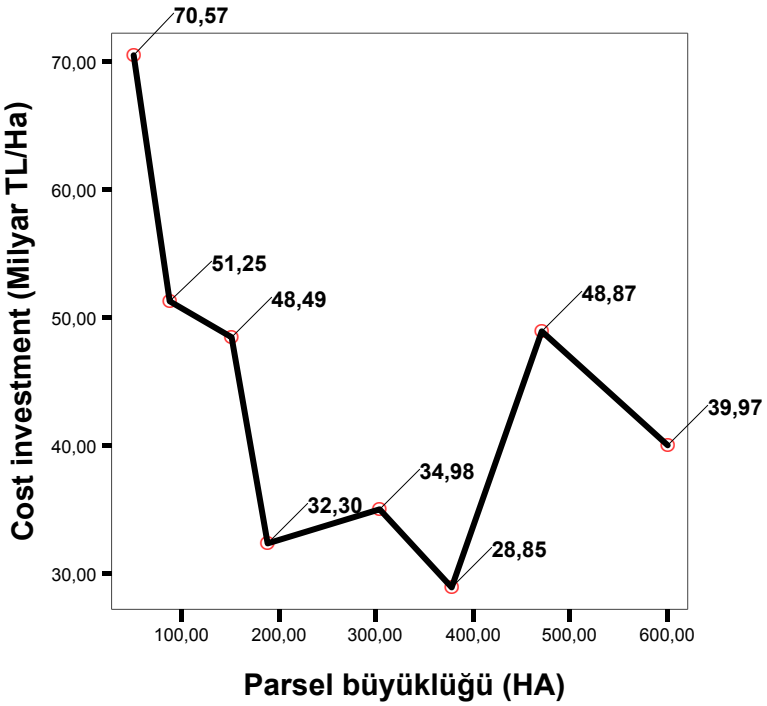
Table 4.8.Optimal Size of Industrial Estates

Size of plot	Number of industrial estates(*)	Total plot size	Average plot size	Average per hectare cost
0-50	2	100	50	70, 57
51-100	12	1055	88	51, 25
101-150	7	1050	150	48, 49
151-200	5	943	188	32, 30
201-300	12	3336	278	34, 98
301-400	4	1508	377	28, 85
401-500	2	940	470	48, 87
501-600	2	1200	600	39, 97

(*) number of industrial estates does not include industrial estates of which financing covered by enterprising committee and which got loan for treatment plant.

Source: The Ministry of Industry and Commerce

Graph 4.2. Optimal Size of Industrial Estates



4. 1. 7. The Demand for Industrial Estates

In Turkey, in structure of present process of industrial estates, the element of demand is not real effective. Because, there are no studies regarding determination of size and kind of industrial estates and as well as beforehand demand on establishment and location selection of industrial estates. The Ministry of Industry and Commerce does not question the demand for establishment wanting to establish industrial estate. So, in addition to demand of industry land there are some factors for establishments that make a start of establishing industrial estate.

Table 4.9. According To Geographical Regions Allotment And Filling Rate Of Industrial Estates

NAME OF REGIONS	COMPLETED BY THE END OF 2002							PRESENT IN THE INVESTMENT PROGRAM OF 2002				
	Number Of Ind. Est	Size (Ha)	% Hectar (*)	Plot number	Numer of manufacturing establishmenı	Establishments on construction and project stage	% Numer of manufacturing establishments	Number of Ind. Est. (**)	Size (Ha)	% Hectar	Number (***)	% Number of Ind. Est (****)
Marmara (11 Provinces)	10	3.582	22,19	1821	1186	781	65	22	5.272	16,64	42	20,79
Aegean (8 Provinces	11	3.012	18,66	1886	1099	411	58	20	5.356	16,91	47	23,27
Mediterranean (8 Provinces)	9	2.278	14,11	988	369	310	37	8	1.145	3,61	12	5,94
Interior Anatolia (13 Provinces) (*)	14	3.288	20,37	14636	6816	366	47	20	9.808	30,96	35	17,33
Black Sea (18 Provinces)	9	905	5,61	631	306	119	48	28	4.659	14,71	39	19,31
Eastern Anatolia (14 Provinces)	5	948	5,87	602	210	65	35	12	2.315	7,31	18	8,91
Southeast Anatolia (9 Provinces))	7	2.126	13,17	1337	561	391	42	7	3.127	9,87	9	4,46
Total In Turkey (81 Provinces)	**65**	**16.139**	**100**	**21901**	**10545**	**2444**	**48**	**117**	**31.682**	**100**	**202**	**100**

(*) İVEDİK industrial estate consists of 7800 small plots.
(**)The number of industrial estates that are on construction stage.
(***)Projects with analysis characteristics were included in the total of construction stage.
(****) the rate of number to rate of total number in Turkey.

source: The Ministry of Industry and Commerce

The main factors of these, for every province having an industrial estate, even in the west for every district having an industrial estate, some local and central groups put pressure in order to obtain industrialization even in form. Therefore, it is believed that it is easier for industry to go to a region whose place and infrastructure is definite then to make establishing out of nothing. On the other hand; production, consumption and trading of the region or district with comparative costs are effective too.

One of the signs of success of an industrial estate is filling rate. After an industrial estate is completed, if all of plots of land are not allotted and establishments are not built and passed to production stage, it can be said that as the public investment productivity of industrial estate is low and the public investment was not used productively by creating idle capacity.

As a consequence of 40 – year practicing of industrial estate, number of plots of land in total in 65 completed industrial estates is 21. 901. The number of allotted plots of land is 19. 100. The number of plots of land that could not be allotted is 2801. The proportion of allotted plots of land comparing to plots of land in total is 48 %. In other words, approximately only on half of plots of land manufacturing is done. Only on three of completed industrial estates on the whole plots of land manufacturing are done. In other words, only three industrial estates reached to 100% filling rate. These industrial estates are Konya I, Manisa I and Eskişehir I. The industrial estates on which there is no manufacturing are İstanbul-iki telli industrial estate and Sinop.

Tablo 4.10. Filling Rate of Completed Industrial Estate and Rate of Allotment of Land

NAME OF REGION	Size (Ha)	Plot number (B)	Alloted plot number (C)	NUMBER OF ESTABLİSHMENTS				As to plot number, allotmet rate (%) C/B	As to plot number rate of manufacturing establishments (%) (E/B)
				Manufac-turing (E)	Constr uction stage	Project stage	Total		
Adana I + Ii (*)	1100	471	407	166	77	115	358	86	35
Adiyaman I	150	82	71	7	9	42	58	87	9
Afyon I	275	228	228	139	13	3	155	100	61
Amasya I	75	34	27	13	5	1	19	79	38
Ankara I	400	194	194	160	3	0	163	100	82
Ankara-İvedik(Oksb)	477	7800	7657	2500	0	0	2500	98	32
Ankara-Ostim	250	4921	3385	3210	163	12	3385	69	65
Antalya I	196	95	91	65	9	0	74	96	68
Aydin	150	119	119	30	22	13	65	100	25
Bilecik I	150	42	41	41	0	0	41	98	98

Bolu I	60	61	61	46	5	0	51	100	75
Burdur I	70	50	49	32	17	0	49	98	64
Bursa-M. K. Paşa	197	70	64	1	1	1	3	91	1
Bursa	150	318	309	157	13	104	274	97	49
Bursa -İnegöl I	300	111	111	85	0	0	85	100	77
Bursa-Demirtaş	475	287	287	257	28	2	287	100	90
Çankiri-Korgun	110	86	58	27	6	2	35	67	31
Çorum I	260	86	82	61	16	4	81	95	71
Denizli	400	141	139	117	26	0	143	99	83
Denizli-Çardak	322	98	96	2	0	0	2	98	2
Elaziğ I	100	57	55	45	3	3	51	96	79
Elaziğ Ii	100	37	28	11	7	4	22	76	30
Erzincan	348	256	38	14	5	10	29	15	5
Erzurum I	100	88	87	51	1	0	52	99	58
Eskişehir I+Ii (*)	290	411	294	197	20	13	230	72	48
Gaziantep I	260	185	185	139	0	0	139	100	75
Gaziantep Ii	500	283	282	159	39	43	241	100	56
Gaziantep Iii	540	289	285	51	24	175	250	99	18
Hatay-İskenderun I	180	38	38	28	8	2	38	100	74
Mersin-Tarsus I	100	152	103	37	22	9	68	68	24
Mersin-Tarsus Ii	280	35	23	10	6	2	18	66	29
Isparta I (S. Demirel)	252	85	65	26	16	23	65	76	31
İstanbul (Deri)	240	480	477	371	344	165	880	99	77
İstanbul-İkitelli Oksb (**)	800	0	0	0	0	0	0		0
İstanbul-Ümraniye	450	110	100	100	8	5	113	91	91
İzmir - Atatürk	600	495	495	420	55	20	495	100	85
İzmir-Menemen(Deri)	200	202	138	102	0	0	102	68	50
Kayseri I	600	457	456	407	28	23	458	100	89
Kirşehir	200	186	100	15	9	24	48	54	8
Kocaeli-Gebze I (***)	230	190	141	76	9	56	141	74	40
Konya I	150	74	74	74	0	0	74	100	100
Konya Ii	300	219	219	157	4	0	161	100	72
Konya-Ereğli	100	66	60	16	19	4	39	91	24
Kütahya I	170	101	90	17	12	61	90	89	17
Malatya I	300	164	151	89	26	7	122	92	54
Manisa I	150	65	65	65	0	6	71	100	100
Manisa Ii	200	20	20	15	2	0	17	100	75
Manisa Iii (Tevsi)	185	59	22	3	8	6	17	37	5
Mardin	300	160	90	57	10	2	69	56	36
Niğde	261	112	68	30	10	2	42	61	27
Ordu	60	82	72	38	17	1	56	88	46
Samsun	150	115	115	49	21	8	78	100	43
Sinop I	100	72	1	0	1	0	1	1	0
Şanliurfa I	286	288	288	133	19	11	163	100	46
Tekirdağ-Çerkezköy I	440	133	133	90	12	6	108	100	68
Tokat I	50	45	45	29	7	2	38	100	64
Trabzon-Arsin	100	104	104	58	14	1	73	100	56
Uşak I	360	358	353	189	70	94	353	99	53
Yozgat	150	110	106	23	17	7	47	96	21
Kirikkale	150	80	44	8	6	21	35	55	10
Kilis	90	50	37	15	8	9	32	74	30
Bartin I	50	32	28	12	15	1	28	88	38
Osmaniye	100	62	49	3	1	3	7	79	5
TOTAL	16139	21901	19100	10545	1316	1128	12989	87	48

(*) Eskişehir I+II and Adana I+II were included in total seperatly

(**) 35 small industry sites (kss) construction kooperative that are present in İstanbul İkitelli oksb, each kss has a plot
(***)since Gebze I industrial estate (230 hectare) can be seen on the list is first stage and has development area of 185 hectare is not include in total size.yet,plots activities in this Development Area Were United With First Stage

Source:The Ministry of Industry and Commerce

According to plot of land looking at rate of allotement compared to rate of number of establishments that manufacture there is a serious increase. The whole of 19 completed industrial estates were alloted. These industrial estates are Gaziantep II, Kayseri I, Aydın, Samsun, Şanlıurfa, Trabzon-Arsin, Afyon I, Tokat I, Tekirdağ-Çerkezköy I, Konya II, Hatay-İskenderun I, Manisa II, Gaziantep I, Bolu I, Bursa-İnegöl I, Ankara I, İzmir-Atatürk, Bursa-Demirtaş, Konya I and Manisa I.

Since the implementations of all industrial estates whose constructions are going on, have not been done, the number of most of plots of land is not known. Number of plots of land in total in industrial estates whose constructions are going on and number of plots of land are known is 7934. 3366 of these plots of land were allotted. In 524 plots manufacturing is done, in 443 plots construction of the establishments is going on and in 720 plots the establishments are in the stage of project.

Table 4.11. Filling Rate of Industrial Estates That Are in the Stage of Construction

NAME OF REGION	size (Ha)	Plot number (B)	Alloted plot number (C)	NUMBER OF ESTABLİSHMENTS				As to plot number, allotmet rate (%) C/B	As to plot number rate of manufact-uring establish-ments (%) D/B
				Manuf-acturing (D)	Constr-uction stage	project stageı	Number of establishme-nts in total		
Adana-Kozan	170	0	0	0	0	0	0		
Afyon-İscehisar (Mermerciler)	150	0	0	0	0	0	0		
Ağri	100	115	0	0	0	0	0	0	0
Amasya-Merzifon	118	50	20	18	1	1	20	40	36
Ankara-Polatli	200	126	50	0	9	0	50	40	0
Ankara II (Türkobasi)	600	0	0	0	0	0	0		
Ankara I (Tevsi)	175	0	0	0	0	0	0		
Ankara Ş. Koçhisar	300	0	0	0	0	0	0		
Antalya II	175	54	2	0	1	0	1	4	0
Aydin-Astim	530	113	113	48	11	54	113	100	42
Aydin-Ortaklar	100	0	0	0	0	0	0		
Balikesir	450	189	49	9	30	1	40	26	5
Balikesir-Bandirma	150	83	9	1	2	0	9	11	1
Balikesir-Gönen(Deri)	150	57	32	0	0	0	0	56	0
Balikesir-Haddeciler (I. Etap)	150	69	0	0	0	0	0	0	0

Bilecik II	200	21	13	3	3	6	12	62	14
Bilecik-Söğüt	140	80	0	0	0	0	0	0	0
Bilecik-Bozüyük	550	133	7	0	0	2	2	5	0
Bilecik-Pazaryeri	100	34	0	0	0	0	0	0	0
Bilecik-Osmaneli	90	26	0	0	0	0	0	0	0
Bingöl	80	37	0	0	0	0	0	0	0
Bolu II (Tevsi)	100	41	19	0	0	0	0	46	0
Bolu-Yeniçağa	110	0	0	0	0	0	0		
Bolu-Gerede I	100	51	23	3	1	0	4	45	6
Bolu-Gerede II (Tevsi)	100	0	0	0	0	0	0		
Bolu-Gerede (Deri)	100	132	0	0	0	0	0	0	0
Burdur-Bucak	90	0	0	0	0	0	0		
Bursa (Deri)	167	148	148	0	0	0	0	100	0
Çanakkale	100	96	0	0	0	0	0	0	0
Çanakkale-Biga	100	53	8	0	1	7	8	15	0
Çorum II	177	69	5	0	0	5	5	7	0
Çorum-Sungurlu	484	0	0	0	0	0	0		
Denizli-Merkez (Deri)	205	0	0	0	0	0	0		
Denizli-Tavas	230	0	0	0	0	0	0		
Denizli-Acipayam (Yumrutaş)	490	0	0	0	0	0	0		
Diyarbakir	523	227	171	42	35	30	158	75	19
Edirne	260	63	3	0	0	3	3	5	0
Edirne-Keşan	200	0	0	0	0	0	0		
Elaziğ-Hayvan Ve Hay. Ürün.	20	11	3	0	2	0	2	27	0
Elaziğ III (Tevsi)	190	0	0	0	0	0	0		
Erzurum II	380	0	0	0	0	0	0		
Eskişehir III	1850	150	100	54	30	13	97	67	36
Eskişehir IV	1000	0	0	0	0	0	0		
Gaziantep IV	1170	0	0	0	0	0	0		
Gaziantep-Nizip	100	41	0	0	0	0	0	0	0
Giresun	70	49	21	1	3	1	11	43	2
Gümüşhane-Merkez	75	60	0	0	0	0	0	0	0
Hakkari	45	0	0	0	0		0		
Hatay-Antakya	150	90	57	5	3	0	57	63	6
Hatay-Payas	100	0	0	0	0	0	0		
Isparta (Deri)	60	0	0	0	0	0	0		
İçel-Silifke	100	0	0	0	0	0	0		
İzmir-K. Paşa I	410	300	0	0	0	0	0	0	0
İzmir-Tire	400	253	253	4	3	218	225	100	2
İzmir-Ödemiş	300	0	0	0	0	0	0		
İzmir-Kinik	85	0	0	0	0	0	0		
İzmir-Aliağa I	922	0	0	0	0	0	0		
İzmir-Bergama	175	0	0	0	0	0	0		
Kars	200	68	58	17	24	17	58	85	25
Kastamonu	100	80	0	0	0	0	0	0	0
Kayseri-İncesu	600	157	65	0	0	0	0	41	0
Kayseri II	600	0	0	0	0	0	0	0	
Kayseri-Hacilar	700	0	0	0	0	0	0		
Kayseri-Develi	225	0	0	0	0	0	0		
Kirklareli	400	46	45	7	6	0	45	98	15
Kocaeli-(Tosb-Taysad)	250	103	73	2	7	2	11	71	2
Konya III	800	340	183	31	50	0	183	54	9
Konya-Akşehir	150	125	0	0	0	0	0	0	0
Konya-Beyşehir	100	0	0	0	0	0	0		
Konya-Çumra	100	75	17	4	1	2	17	23	5

Kütahya-Gediz	250	48	0	0	0	0	0	0	0
Malatya II	350	158	15	0	2	13	15	9	0
Manisa-Akhisar	300	67	33	4	2	21	27	49	6
Manisa-Turgutlu	162	71	22	5	1	2	8	31	7
Manisa-Salihli	120	57	14	0	1	1	14	25	0
Kahramanmaraş	300	145	118	0	0	0	0	81	0
Muğla	300	60	0	0	0	0	0	0	0
Muğla-Milas	137	0	0	0	0	0	0		
Muş	300	56	0	0	0	0	0	0	0
Niğde-Bor (Aritma Dahil)	292	314	112	0	16	0	16	36	0
Ordu-Fatsa	100	44	1	0	0	1	1	2	0
Sakarya I (**)	150	64	64	32	22	10	64	100	50
Sakarya II	320	106	100	0	3	3	6	94	0
Sakarya III	255	66	35	0	1	0	35	53	0
Samsun-Kavak	104	83	0	0	0	0	0	0	0
Samsun-Bafra (Borsab)	250	143	0	0	0	0	0	0	0
Siirt	100	81	0	0	0	0	0	0	0
Sinop-Boyabat	100	0	0	0	0	0	0		
Sinop II (Tevsi)	76	0	0	0	0	0	0		
Sivas I	180	202	137	33	20	35	88	68	16
Sivas II	850								
Tekirdağ-Çerkezköy	920	290	290	49	11	0	60	100	17
Tekirdağ-Hayrabolu	100	105	0	0	0	0	0	0	0
Tekirdağ-Çorlu (Deri)	120	0	0	0	0	0	0		
Tekirdağ-Malkara	100	69	0	0	0	0	0	0	0
Tokat II	150	128	79	17	31	21	69	62	13
Tokat-Turhal	125	0	0	0	0	0	0		
Tokat-Niksar	210	0	0	0	0	0	0		
Tokat-Erbaa	170	117	17	6	3	3	12	15	5
Tunceli	100	36	0	0	0	0	0	0	0
Şanliurfa II	1134	0	0	0	0	0	0		
Uşak (Deri)	260	446	359	2	25	78	105	80	0
Uşak II (Tevsi)	240	0	0	0	0	0	0		
Van	200	96	40	16	22	2	40	42	17
Zonguldak-Çaycuma	125	74	41	14	10	4	28	55	19
Zonguldak-Çaycuma II (Tevsi)	65	0	0	0	0	0	0		
Zonguldak-Ereğli	200	112	35	0	0	0	0	31	0
Zonguldak-Alapli	150	0	0	0	0	0	0		
Zonguldak Osb	500	0	0	0	0	0	0		
Aksaray	286	137	86	25	37	24	86	63	18
Bayburt	500	127	0	0	0	0	0	0	0
Karaman	400	207	177	72	13	96	181	86	35
Kirikkale Keskin	400	0	0	0	0	0	0		
Batman	100	76	6	0	0	6	6	8	0
Ardahan	150	0	0	0	0	0	0		
Iğdir Osb	200	0	0	0	0	0	0		
Karabük	100	50	0	0	0	0	0	0	0
Düzce	200	84	38	0	0	38	38	45	0
TOTAL (B)	**32242**	**7934**	**3366**	**524**	**443**	**720**	**2030**	**42**	**7**

Source:The Ministry of Industry and Commerce

According to the plot of the land the highest rate of number of establishments that manufacture is Sakarya industrial estate with 50 % filling rate. Sakarya is fallowed by Aydın-Astim with 42 % filling rate and Amasya-Merzifon and Eskişehir III with 36 % filling rate.

According to the number of plots the highest rate of allotment in industrial estates that are in stage of construction; Aydın-Astim, Bursa (leather), Sakarya I and Tekirdağ-Çerkezköy II with 100 % rate of allotment.

Particularly industrial estates that reached to certain filling rate, because of agglomeration economics demand increases fast. On the other hand, in industrial estates that has less demand, the demand decreases. For instance, in Eskişehir, Gaziantep, Konya, and Manisa industrial estates, soon after stage I and II got full , work was started in order to establish III and even IV enlarging regions. However, Sinop I and Erzincan industrial estates have been completed for a few years, demand is still little.

In conclusion, today's practicing fund of industrial estates taking into consideration of having 'the public investment' position, the ministry of industry and commerce, guiding this investment, should have more effective status on place, priority and choosing industry branches of industrial estate that will be established.

4. 2. Comparing Practices of Industrial Estates in Turkey to Practices of Industrial Estates in the West

Comparing practices of industrial estates in Turkey to practices of industrial estates in the west, the objective of establishing industrial estate is identical. Looking at the objectives in practicing, in a country such as Turkey industrial estates were seen as a means of encouragement and employment in order to speed up industrialization. For this reason industrial estates were become widespread throughout the country and established nearby cities. However in the developed west countries new cities were planned with industrial estates in order to make industry widespread in rural areas, prevent big cities from getting bigger and decentralize industry by putting forward features of industrial estates which are place organizer and creating external economies.

So, industrial estates have been quite successful on removing interregional imbalance in Italy and England.

The other considerable comparison is about types and scales of industry. In the developed west countries specialized industrial estates were established in order to create external, scale and agglomeration economies. However, in Turkey 'mixed industrial estates' are more common. Since the number of industrialists is insufficient and capital accumulation has not been obtained without sector discriminating every kind of industry has been allowed to be established. Only two of completed industrial estates are specialized leather industrial estates. Although one of these two industrial estates İstanbul-Tuzla is a specialized industrial estate, there are some factories from different sectors. Since leather factories have to purify not only biologic waste but also chemical waste, they come together in order to decrease the cost treatment plant. Mixed industrial estates can accommodate all kinds of movement that do not have any manufacturing connections such as textile, machine, auto spare item, paint, electric house tools, automotive, food factories, wood products industry and butane gas filling establishments. Although in development plans it has been proposed to establish specialized industrial estates in developed regions, in practice it did not come true. Thus with this kinds of establishments external economies have not been able to obtained.

Another difference is establishment size that should be present in industrial estates. There is no universal establishment size, because classification of establishment size changes from country to country. According to definition of United Nations; establishments that have 1-100 employees are small scale, have 100-200 employees are medium scale. In Turkey according to The state institute of statistics; establishments that have 0-9 employees are small scale, 10-99 employees are medium scale and 100+ are large scale. As it has been emphasized in definition of the United Nations industrial estates were presented in order to be in the service of small and medium scale establishments.

However, in Turkey small industry sites have been established for small scale establishments, it has been aimed to establish medium and large scale establishments in industrial estates. But this did not occur in practice so from carpet washing factory that have 5 employees to automotive factory that have 4500 employees all sorts of scales industry establishments were established in industrial estates.

In Turkey, plots that are present in industrial estates are transferred to industrialists by sale after their infrastructure have finished. Industrialists build their factories on the plots by getting loans. That is to say there is a practice that does not stipulate standard factory buildings as it is said in definition of the United Nations and is similar to Europe continent type. In these lands not only Standard factories but also standard plots were not being able to determined. Industrialist who wants more than one plot can buy so different size of factories come into existence.

The difference between practices of industrial estates in Turkey and the developed west countries can be summarized as it is in the table below:

Table 4.12. Comparison of Practices of Industrial Estates in Turkey and The Developed Western Countries

	West countries	**Turkey**
Type	Specialized	Not specialized
Location	Half urban areas	Urban areas
Administration form	Generally by private establishments that do not have profit aim	by private establishments that do not have profit aim
Appropriation form	Plots for hire and sale	Plots for sale
Provided services	Standard factory buildings or Standard plots, infrastructure and common service foundations	Not Standard plots, infrastructure and common service foundations
Finance	Loans possibilities	Loans possibilities
Scale of firm	Small and medium scale establishments	Small, medium and large scale establishments

Source: Asuman Çezik-Ayda Eraydın 'Industrial estates in Turkey (1961-1981), p. 6

4. 3. Contribution of Industrial Estates Through Industrialization and Urbanization Process in Turkey

The objectives of establishing industrial estates in Turkey as stated before are: a- industry encouragement , b- obtaining interregional balance, c- improving urban settlement more planned and systematic. But industrial estates have not been really effective in practicing of the objectives.

As a result of 40-year practicing of industrial estates, 65 industrial estates have been able to completed. In spite of investments of industrial estates that are in stage of construction and studies, the number of industrial estates that have started activated is very low. In completed industrial estates-16139 hectares infrastructure was provided for 21901 plots-work place. Only in 48 % of these plots manufacturing is being done. So, considering improvement of industry in the last forty years in Turkey, the number of establishments that are present in industrial estates that have been operating, the capacity of employment, present employment and capacity of manufacturing industry are so low.

Completed 65 industrial estates all do not have the status of industrial estate. Because some of these industrial estates that were built as an industrial zone applied to the ministry of industry and commerce and got the identity of industrial estate in order to benefit from encouragement of industrial estate. Not only location selection and physical structure of these industrial estates but also scales of the firms are so different than industrial estates built systematically. The common features of these industrial estates are that they were established inside the city or just touching the city, were built intensively comparing to industrial estates and estates where small and medium scale manufacturing industry establishments come together. Besides, there are some industrial estates such as Ankara OSTIM and Ankara İvedik that have small industrial sites characteristics and work centre industrial estates for storing and commerce in industrial estates that are forbidden. These two kinds of industrial estates are about half of plots of completed industrial estates. The reason for these industrial estates of having that many plots despite their small spaces is that most establishments have characteristics of establishments that are present in small industrial sites. In other words, the establishments that are present in industrial estates have less workers.

Turning the industrial sites into industrial estates provides big advantages for establishments that are present in these areas, whereas it is pretty dangerous regarding present industrial estates practicing. Because these sites do not have location selection, administration, physical structure and characteristic of establishments industrial estates characteristics, expected benefits from industrial estates can not be seen and also encouraging this construction, the success of normal industrial estates is being decreased. So location selection in normal industrial estates becomes a disadvantage. What it should be done is that instead of converting these sites to industrial estates in order to prevent agricultural land loss or pollution by taking the sites under control, it should be put pressure on establishments that are present in these sites.However there has been an increase in number of these kinds industrial estates.

When constructions of industrial estates, that are continuing, are completed, 31682 hectares land will be presented to industrialists with completed infrastructure for **……** work places.
In addition to these, work of 85 industrial estates in stage of site analyses is carrying on.

So when industrial estates whose constructions are carrying on are completed , 47821 hectares land with the present industrial estates will be presented to industrialists

Regarding regional development objectives, 65 of industrial estates were established in 2002 -9 industrial estates were established in Blacksea Region, 7 in Southeast Anatolia Region, and 5 in East Anatolia Region. Of 16139 hectares completed industrial estates in total, 3979 hectares in other words only 24 % of total land of industrial estates were established in the rest three regions.

In Turkey, the number of establishments that are manufacturing in industrial estates is 10.545. 1077 of these establishments that is to say 10 % of total number of establishments are manufacturing in the rest of three regions (Blacksea Region, Eastern Anatolia Region, Southeastern Anatolia Region). In conclusion, it appeared that most of completed industrial estates were established in developed regions and practicing of industrial estates up to now has not been effected on obtaining interregional balance.

On the other hand industrial estates should be accepted as means of development in country, region, metropolitan and city planning, controlling industrial settlements, forming external economies by providing great agglomeration and obtaining systematic urbanization, pioneering new cities establishment and improvement when it is planned, obtaining rationality in using physical land.

Regarding means of using city place in a more planned and systematic way, although there is a certain planning system improved, in practice there is no an important action done. One of the main reasons is that despite the fact that there are some valid criterions and standards for location selection, in practice location selection subject has caused disagreements among establishments and tendency of neglecting present criterions caused location selection that does not serve to the objectives of place organization. The economic and social importance of location selection is not still understood.

As a result of not having preferences of certain industry types except requests of each industrialists individually, the concept of specialized industrial estates with different characteristic did not have any contents in practicing so in Turkey the usage of industrial estates as a means of planning became less. Therefore the present practicing turns into creating a place that every types of industry group together near the centre of city (Cezik&Eraydın, 1982)

Since the practicing was formed only to cover industry- land demand in every city, pressures increase in order to establish industrial estates nearby the frontiers of settlements. This approach causes problems particularly in areas that have productive natural sources and usually the land necessary for industrial estate despite the damages in improved agriculture incomes and potential, in natural environment that has tourist importance and unhealthy improvement in residence areas; industrial estates create the tendency of establishment on frontiers of city that is the centre of province.

The location of industrial estates determines the improvement direction of cities. The land of industrial estates that are in surroundings of city with the land that stay among settled texture of city soon change into residence areas and become united with where industry is dence despite the fact that it is not put forward in the implementation plan. As a result of attractive characteristic of industry, this case may create not only

settlement problems regarding features of lands that stay between industry and settled texture land but also may cause environmental problems regarding unplanned and unsystematic settlement areas nearby industry.
Since the possibilities of finding location for industry using the infrastructure done by the state which has shorter time than other ways, was not restricted during long construction period of time and although locations of industrial estates and small industry sites were determined in the implementation plan, effective measures were not taken in order for industry to be established only on these locations, possibility of industrial estates being an effective means on organization of place became narrow.

In Turkey, since micro scale industry planning is not done, the provinces and districts where industrial estates will be established is determined by demands from establishments wanting to establish industrial estates and also tendency of politicians. Therefore, whether an industrial estate is established in a city, if so where should it be established is not determined by planning politics but by Chambers of Commerce and industry and politicians.

The most important factor on location selection of industrial estate after deciding on in which provinces and districts industrial estate will be established is that whether chosen area is national treasury land .In addition to this slope of the land should be low. Because national treasury lands are sold to industrial estates for less than their price and comparing to expropriation transfer of the land is obtained in shorter time.

So, process of planning settlements and establishment and location selection of industrial estate do not work relatedly but so differently. Because these two processes do not join, unexpected cases occur and soon after industrial estate starts operating if plans are not revised, they loose their functions. Thus, urban occurrences that are not suggested in master and implementation plan occur. Because the institutions and foundations that do plans are not authorized on deciding where industrial estates will be established, doing plans they do not consider the economic, social and place effects.

Location selection committee does not do any studies about effects of industrial estate on nearby environment-settlements. So soon after industrial estate has been established, the area between settlements and industrial estate is build unsystematically. If industrial

estate is established on border of municipality, the municipality is asked for its opinion but even if industrial estate is established near settlements but not on borders of municipality, opinion of municipality is not asked and municipality is not asked to participate in location selection committee. The reason under all these deficiencies is that industrial estates in Turkey are still not seen as a means of guiding settlements so they are seen as the public investment that present plots with ready infrastructure for ordinary industrialists. Although industrial estates are very important means of urban land that guide urban occurrences with transportation system, small industry sites, commerce, residence and employment are pulled to surroundings.

Another deficiency in practicing up to now is that due to the objective of decentralization of industrial estates, new city and systematic urban settlements could not be formed. Planning new residence settlement in addition to industrial estates helps the problem to be solved, on the other hand prevents cities from excessive growth and population.

In conclusion, there are some benefits in micro scale, regarding macro scale industry although a great deal of encouragement and decreasing interregional investment differences have been done through industrial estates or industrial estates are places that have the most suitable locality standards; there is still no great success on regular locality usage.

4. 4. The Reasons for Industrial Estates Not Being Able to Reach Success

We could gather the reasons for industrial estates not being able reach their objectives in Turkey under 5 topics whereas industrial estates in the western countries are being practiced and have success. The first one is whether location selection of industrial estates is convenience, the second one is lack of coordination, the third one is lack of financial source, the fourth one is industrial estates policies that are determined in development plans in details but not practiced, and the fifth one is that the legality of industrial estates law became late.

Doing location selection of industrial estates, fussiness and carefulness that are necessary for practicing industrial estates policies, has not been shown. Instead of that

with approach of ‘at least an industrial estate for every province’ which is far from selectiveness and without considering possibilities of practicing, location selection has been done. Industrial estates in accordance with their establishment objectives are arrangements that should reflect demand factor. Whatever the aim of establishing industrial estate is, in accordance with logic of the system they should be established where local capital is dence and where there is enough demand for developing industry.

In Turkey, establishment and location selection of industrial estates without any studies are decided by politicians, local administration, industrialists and Chambers of Industry and Commerce instead of supply-demand relationship. Therefore, in only 48 % of total plots of completed industrial estates manufacturing is being done and also in industrial estates where there are empty plots irregular industry spaces appear.

In developed provinces almost in every district, in normal or undeveloped provinces in the centers at least one industrial estate has been established or is being tried to be established. This kind of practicing conflicts with the objectives of industrial estates. Areas in which there is no enough capital accumulation, as a result of establishing industrial estate, idiol capacity has been created.

Location selection of industrial estates is done according to administrative criterions of province and district instead of economic criterions such as economic provisions of near environment and hinterland.

In studies of 1 / 100000 scale threshold analysis and 1 / 25000 scale of alternative areas, no importance attached to location selection criterion. Because it is passed to procurement without doing enough geologic study, it is being come across a great deal of problems. Feasibility studies after area allotment are done for formality process. For infrastructure of determined area feasibility reports are prepared without obtaining introductory information from related institutions or without respecting the information. Thus, in the determined area after expropriating, it is come across impossibilities or difficulties about allotting water and energy. The standard of feasibility report should be present in law and regulations and the Chambers of Industry and Commerce should be in charge of inspection. (Özdemir, 1990)

Land usages of incorrect location selection create a lot of negative effects on planned development and environment problems. Many industrial estates have been established on agricultural lands and agricultural lands cease to exist because of their needs of land and because attractive features of industrial estates pull residence and commerce activities to its surrounding.

Second, lack of organization had a lot of effects for industrial estates not being successful until April 2000, when industrial estate law came out. Although with industrial estate law authority and commitment of institutions were determined, problems in practicing are going on. This deficiency reflects to every stage of industrial estate, from stage of location selection to stage of settling down and managing.

Although with industrial estate law authority and commitment of institutions are determined, enough inspection is not being done. Thus industrialists are doing land speculations.

Another important lack of organization is low output resulted from connecting kind and scale of industry according to some certain criterions but not practicing them. In areas that have potential of development industry, selection of the kind of industry that will take place in industrial estate should have the relationship and the quality of increasing output with others. Thus, industrial estates should have an aim. For instance, with industrial units being together, productivity increase more than providing industry land that has completed infrastructure to any type of industry establishments. Therefore, particularly in developed regions a selective approach is necessary about industry types. (Çezik, 1982)

Since there is no enough demand for industrial estates established and runned in less developed regions, selectivity about types of industries would not make any sense. In these regions industrial estates inevitably act as providers plots that have completed infrastructure for establishments of different sectors.

Since encouragements practiced in order to pull industry from developed regions to undeveloped ones has not been attracting, industry have continued to choose places in

developed regions. The rate of encouragements should be increased in order to pull industry from developed regions to undeveloped ones.

It can be seen that as a result of not being to able establish central and local organization, infrastructure, construction and settlements delay so completing an industrial estate approximately lasts 10 years. It is impossible for an industrialist to wait that long. In this case industrialists choose to obtain plots individually. They usually establish their establishments on plots of which infrastructure is done either by the municipality or by the public establishments. Because there are not any lawful and managerial practices that force the industrialist, who wants to establish medium and large scale industry establishments, to establish his factory in industrial estates. These industrial areas that form irregularly usually generate unwanted direction of growth and cause serious problems regarding land usage plan and economics. Productive and watery agriculture are gradually killed by industry.

The reason for construction time being long is that feasibility studies of industrial estates can not do a realist loan and construction program.

One of the reasons for construction and settlement getting long is that region administration does not fulfill its authorities and commitments such as demand organization, providing industrialist contribution, observing and supervising factory constructions.

In particular, in industrial estates having use loan from the ministry, in procurements of infrastructure construction among 'The Ministry, enterprising organization and contractor' serious problems appear. The ministry gives procurements to contractors who it wants.

Third, lack of financial source had not been reason for being unsuccessful until 1998. Up to this year the continual differences among sources allotted and spent shows clearly and particularly indicate financial organization problem more than financial difficulties.

After 1998 in addition to delayed projects for some reasons, costs of project and financial problems gradually have been greater. Because inadequate source that is

provided by the ministry of industry and commerce from its own budget for construction of industrial estates is divided into many industrial estates, constructions of infrastructure in industrial estates go so slowly. The ministry should complete the projects that have priorities in industry and should have this as a principle instead of enforcing a lot of industry at once. With this selective approach the time of construction could be shortened and reached to more productive work system. (Balaban, 2000)

Fourth; in Turkey industrial estates policies and expected benefits are stated in five-year development plans. With direction of the policies and expected benefits, commitment of practice of industrial estates has been given to the ministry of industry and commerce. The ministry according to the policies and expected benefits did not do industrial estates planning on micro scale by developing strategies. Consequently, deciding on establishment of industrial estates, only micro scale criterions of location selection are checked. Acting with political worries, governments decide to establish at least one industrial estate fitting micro scale criterions of location selection in every province. However, for industrial estates becoming that widespread conflicts with policies of expected benefits from industrial estates. (Özdemir, 1990)

Finally, the law that arranges establishment,location selection, management and operating of industrial estates, took long to come out. This caused construction time of industrial estates getting longer, remaining unowned, increasing costs, authority and commitment confusion.

The reason for being unsuccessful is that expectations were kept high without taking economic circumstances of Turkey into consideration.

Chapter 5.

DEVELOPMENT OF INDUSTRIAL ESTATES AND MANUFACTURING INDUSTRY IN İZMİR

5.1. The Development of Manufacturing Industry and Its Importance and Allocation in the Economy of Turkey

The process of industrialization in İzmir from establishment of republic up to now with practiced macro economy policies of Turkey were examined in respect to periods.The development of industry sector from 1923 up to now could be examined under the fallowing titles; liberal period (1923-1930); partisan of state control period (1930-1950); liberal searching, the period with many political parties (1950-1960) ; planned development economy (1960-1980) ; liberal transformation (after 1980).

In liberal period 1920-1930, since most of the Liberation War took a place in İzmir and laventens who owned the big part of external trade migrated from İzmir during and after the war, the economy (industry) of İzmir was effected negatively. In 1923 the fact that Turkey First Economics Congress took a place in İzmir had a very crucial impact on industrialization of İzmir.

At this period, agricultural products were cultivated in foreign establishments and exported by them. Established factories on weaving sector increased in this periods and taken over from foreigners some investments were expropriated and carried out running. Due to the economic crisis in the world, there was not any important development in industry in this period.

In the census done in 1927 , it was stated that İzmir was the second big industry city after İstanbul. (Barbaros, 1995, p.96)

First factories had actual characteristic of industry in İzmir were established between 1924-1935.These factories are particularly on weaving sector; Şark industry (1924), İzmir cotton textiles (1932), Kula textiles (1933), and İzmir woolen textiles (1935). And also flour factories, wood products establishments ,small scale agricultural and

construction equipment factories started to be runned in this period. (EBSO, 1999, p.96)

Location selection of industry mostly were in the centre not in the surroundings up to 1950s.Industries chose places in the centre specialized in food sector (fig,tobacco and grape).In addition, there were one wood products, and one chemistry and leather industry establishments.Between 1945-1954 , all negative effect of the Second World War were felt in İzmir.In spite of this ,weaving industry establishments were established as well as vegetable oil, canned food and pasta factories.Industry establishments that were established in the period are; Çimentaş (1950), Taç industry in weaving sector (1952), Sümerbank printed industry establishment (1953), DYO in paint sector (1953), Betontaş in concrete industry (1955), Metaş in metal main industry (1956), Etitaş in transformer manufacturing (1957).And also Alaybey shipyard was established in this period (1952).

In this period an important amount of loans that were used by Marshall plan in Turkey transfered to İzmir.

In 1950-1960 with establishing infrastructure establishments, after İstanbul İzmir had the highest rapid of developing industry .Morever this period became a turning point with regard to location selection.The industry establishments, that gathered in the centre up to 1950, started to spread to surroundings municipalities between 1950-1960.

The development in industry made agriculture employees pass to industry sectors and in 1960 the population of İzmir went beyond one milyon.

In planned development period between 1962-1980 İzmir kept the feature of being centre of trade and exportation.

After 1960 in İzmir and its suroundings, companies shared with foreign capital started to be established. In automotive industry BMC (1964), alcohol industry Tuborg beer (1967), paper industry Viking paper factory (1969) were established in this period.Later on in İzmir and its suroundings cotton and woolen weaving industry started developing as well as olive and vegetable oil, food, construction equipment industries. In 1970s

investments on metal, chemistry, machine, matallic objects, automotive side industry and agriculture equipments sectors.Aliağa refinery, Petrochemistry establisments (PETKİM) and Seka Dalaman establishment were the biggest public investments in that period.

The employment of vehicle industry increased ten times, metallic object industry five times, plastic industry four times increased in this period.

With regard to created added value and employment , in this period the most strongest sector was food industry.In 1964 chemistry industry was in the third sequence, whereas in 1972 went up to second sequence by creating added value and 1979 it had the higest added value among sectors.Weaving industry that started to develop in 1960-1970, as for added value metal equipment and machine industry substitude for it.In 1960s, metal equipment and machine industry were supported and afterwards this sector improved considerably.(EBSO, 1999, p.160)

In 1976 in order to prevent pollution caused by disorganized industries in İzmir and contribute to developing of the city, with the aim of gathering all industries in a certain area Atatürk industrial estate was established.

In order to work out the changes of added value and created employment through years in underside sectors and manufacturing sectors of İzmir between 1980-2000, the factors that effect the going-on economy of Turkey and The world as well as the results of these effects on manufacturing industry were discussed.In fact the effects of these changes can be seen on manufacturing industry sector of İzmir during this period.

After 1980 with the new configuration of economy; looking at periodical changes in Turkey , considerable decreases occured in the growth of economy in 1980, 1994, 1998, 1999 and 2000.The economy of Turkey got into a tight period between 1989-1994 and 1998-2000. However 1989 and 2000 were more important during this period of 20 years.1989 was important on removing controls of exchange and setting free the movements of capital with external world.On the other hand 2000 was important on setting free the rate of exchange.

In the first half of 1980s with the effects of the positive developments of civil finance approximately 5 % yearly development in the first 10 years occured by transfering considerable sources. Particularly, from 1986 since monetary encouragments added to investment encouraging precautions and since these encouragments are big enough to effect investment decisions this caused considerable investments on some sectors.The practicing of premium of source usage support as a donation was nearly half of the investments.So this practicing caused an explosion of investment in tourism, health, education sector as well as prior regions in development and industrial estates. Especially provinces like Denizli, Malatya, Çorum Kahramanmaraş and Karaman in which little investment has been done up to now a great deal of investments was done.From 1990s because of the fact that sources that were for supporting investments were decreasing and the negative points on premium of source usage support and also the pressure of premiums on the budget the practicing of premium of source usage support was removed in 1993. Therefore , according to the subject and place of investment loan support from fund sources in different rates began to be practiced. This practicing also ceased in 1994.(p.144)

In 1986, the economy increased above aimed long term momentum with the support of suitable international provisions resulted from decrease in petroleum prices and increase in interior demand.This process continued in 1987 and the speed of development was 9.8 %.

In order to cease imbalance in economy, the prices of goods and services produced by public were increased by the end of 1987 and in 1988 a series of precautions were taken. The objectives of these precautions were to breake importation , liven up exportation and decrease expenses of the public.In order to lower public deficits decreasing public investments and putting higly high prices on insufficient products increased the inflationist expectations made negative effects on decisions of production and investment of private sector. Therefore, in the second half of 1998 economy calmed down particularly in manufacturing industry and interner demand decreased.In 1998, speed of gross national income development comparing to 1987 decreased and become 1.5 %.

Turkey, could manage a rapid development of economy until 1988, started being in an unstable situation defined stop-rise due to the fact that it could not renew short life capital and increase present capacity.In 1988 and later unemployment and deficits of budget increased and in paralel with this increasing prices speeded up.

After reaching certain aims in infrastrucuture investments of public in 1989-the last year of planned period- decreasing allotments for infrastrucuture investments of public , an increase in current process balance enabled a passage to a new economic period. Accordingly, 1989 had a feature of being a passage year.

With approach of keeping rate of exchange nearly stable and keeping interests high it accomplished high development speed by owing to financial liberalization and by access of short term loan called 'hot money'.Labour and incomes from agriculture that were kept under strict control until 1988, were increased again beginning from 1989.This increased current public expenses accelerate them in internal market. The government ,that prefered to cover the expenses by pressing internal depts instead of taxes, needed more sources with the pressure of war expenses in the Eastern Anatolia.

In opposition to 1980s alot of economic signs showed that in 1990s the situation was going bad again.

In 1990s the whole financial markets in the world went into crisises. Financial crisises that occured in money system of Europe between 1992-1993, in Turkey and Mexico between 1994-1995, in Southeast of Asian countries in1997, in Russia in the end of 1998 and in Brazil in the beginning of 1999, in Turkey and Argentina in 1999 and 2000 did not only have an effect on these countries but also on developing countries. Crisises start financially but also effect producer sectors.

As a result of exterior factors such as stagnation in the world economy and gulf crisis in the beginning of 1990s as well as chronic problems such as high inflation rate, public deficits, external and internal dept stocks, Turkey had an economic crisis in 1994.After this crisis, Turkey fulfiled a series of precautions package known 5 April decisions for stability in the economy. External and internal factors mentioned above caused

slowness in the rapid of increase of exportation in 1990-1993 and during this period the exportation only could accomplish 15 billion dolar.

The financial crisis in 1994, greatly affected manufacturing sector and drew back the economic growth .These developments caused considerable increases on rates of inflation and interests.Manufacturing wages regresed again.

The tendency of rapid increase observed in manufacturing industry after the crisis in 1994 lasted until the second half of 1998.

Some Asian countries beginning from the middle of 1997 faced three serious financial crisises.Yet this did not affect us a lot since the rate of industry products exportation to these countries is low in total rate of our exportation and the majority of the products is iron- steal. However, Asia crisis in 1997 followed by Russia crisis in 1998 , industry products exportation of Turkey was affected negatively.Looking at distribution of exportation to Russia Federation, textile ,ready-made clothing, shoe,food,chemistry industry products,electrical machines and highway vehicles were mostly sold.After the crisis exportation of suitcases and commerce of border became less.

In the first two years of seventh five-year development plan 1996 and 1997 7-8 % growth occured. Yet the recesion started in 1998, as described above the crisises drew national income of Turkey back. External and internal markets started becoming narrow due to the fact that Turkish economy and industry became stagnant in 1999, production decreased greatly and the effects of the earthquake in Marmara in August 17.With the effects of the earthquake in manufacturing of industry sectors there was a 4.8 % decrease. In 1998 the rate of capacity usage was 76.5% whereas it went down to 70% in 1999.

In conclusion, as a result of the evaluations regarding Turkish economy between 1980-1999 stopping investments high inflation and financial crisises effected growth and employment negatively. In addition to unstability resulting from chronic public finance imbalance provisions of rant economy prevented the economy from investments and manufacturing. The consequences of the economic crisises in 1999 and 2000 were not be able to evaluated since datas were not be able to obtained.

The financial crisises showed that intensity on a few manufacturing industry sectors deepen financial crisises and increase negative effects on manufacturing sectors.Thus, food, textile and main metal industry (particularly iron-steal manufacturing), that form a great part of Turkish manufacturing industry, tried to spread its intensity to other sectors.from sectors that based on labour and have low added value to sectors that have high added value and use improved technology and have competition power.

Examining development and configuration of sectors that form manufacturing industry of Turkey after 1995, these conclusions came out; After customs unity with Europian Union with removed quotas the expectation of considerable increase in exportation beginning from 1995 investments speeded up and between 1995-1997 Turkey was in the first row among countries made big investments on textile sectors.Consequently, intensive modernization and new investments were done and considerable improvements was achived.Since expected increase in demand did not occur and the crisis in Russia exportation to Turkey decreased and beginning from the second half of 1998 investments went down.

In tobacco and tobacco products industry 1998 production increased by 12.2 %.The increase was because tobacco manufacturing quota was not determined in 1997 and moving from cigarettes manufactured from east kind tobacco to blanded kind cigarettes was another reason.In this period new investments were done.

In wooden products industry with grate number but small capacity family businesses were still exist.This structural characteristic is still having a negative effect on establishing optimal capacity establishments.

In paper industry, established capacity increased in 1998 due to private sectors.The most important reason for increased manufacturing was manufacturing newspaper and cigarette paper in public part as well as new private sector establishments.

The decrease observed in printing industry continued in 1997 and 1998.The decrease was completely due to private sector.

Leather sector as a result of Russia crisis in 1998 went bad.Because Russia was an attractive market for both exportation and commerce of suitcases.

In main metal industry firms, that manufacture main production and mainly manufacture according to internal demand, were effected negatively in both internal and external market because of the competition of strong European firms .Also the difficulty in exportation of iron-steal because of the crisis in Southeast Asian countries to which we export 30 % of our iron-steal products effected iron-steal manufacturing negatively. Since Turkey is insufficient in searching and developing study it is not competitive enough.

Industry based on stone and earth, ceramics industry was effected by discount made in some European countries and other manufacturing countries that effected by Asia crisis. This decreased manufacturing increase speed and reduced the prices.

In industry of manufacturing machines without electric because of low demand manufacturing decreased.

In automotive industry in 1998 with statute of private enterprise there were 16 establishments manufacturing and they generally manufactured with licences.The decrease in automotive industry in the last quarter of 1998 was resulted from low demand in the country.And also the high interests effected the demand negatively. Customs Union done with European Comminity and the nearness to Europe, Middle East and North Africa markets were important factors for increasing new investment tendency for future and having new manufacturers in the sector.Consequently, South Korean Hyundai, German Ford, Japan Honda and Toyota firms investing they started manufacturing.

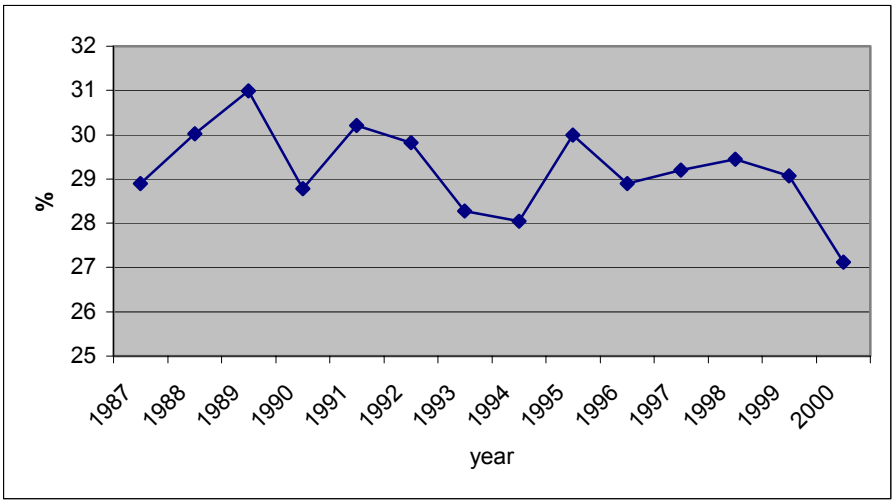
Examing after 1980 period , the development of manufacturing stopped and central government and entrepeneur of İzmir had disagreement after 1983. The economy of İzmir became narrower attracted attention.Furthermore industrialization in İzmir stopped.

In 1990s interest of foreign capital in the city increased so in the beginning of 1990s gigantic international investments such as Opel, Philip Morris started. However new investments did not contiuned later.

Between 1980-2000 the importance and allocation of added value created by İzmir manufacturing industry, number of employees who were working and portion of created value in outcome of gross province in manufacturing industry of Turkey are examined.

According to the datas of State Institue of Statistic in 1987-2000, unit prices of 2003 and outcome of gross province of 2000 are 33209 trillion TL and the value of manufacturing industry is 9009 trillion TL.In other words, created value in manufacturing industry in 2002 the proportion of created value in manufacturing industry to proportion in outcome of gross province is 27.1.Between 1987 and 2000 outcome of gross province of İmir and value of manufacturing industry were on increasing trend.But since the incresing speed of outcome of gross province was more than the value of manufacturing industry, this period the rate of manufacturing industry in outcome of gross province so for years decreased . Between 1987 and 2000 with the rate of 27.1 % manufacturing industry in outcome of gross province went back to the least level.

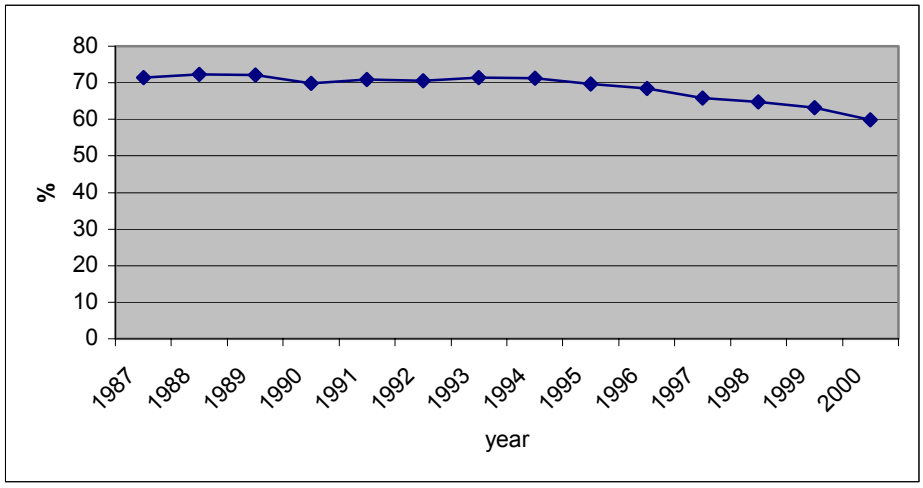
Graph 5.1. The Rate of Manufacturing Industry of İzmir in Outcome of Gross Province



Source: SIS, İller itibariyle Gayri safi yurtiçi hasıla, Ankara

The most part of value of manufacturing industry in Aegean Region was constitued by İzmir manufacturing industry.However, the proportion of value of manufacturing industry in İzmir to manufacturing industry in Aegean Region is on decreasing trend.The rate of İzmir was 72 % in 1987, whereas it went back to 59.8 % in 2000.

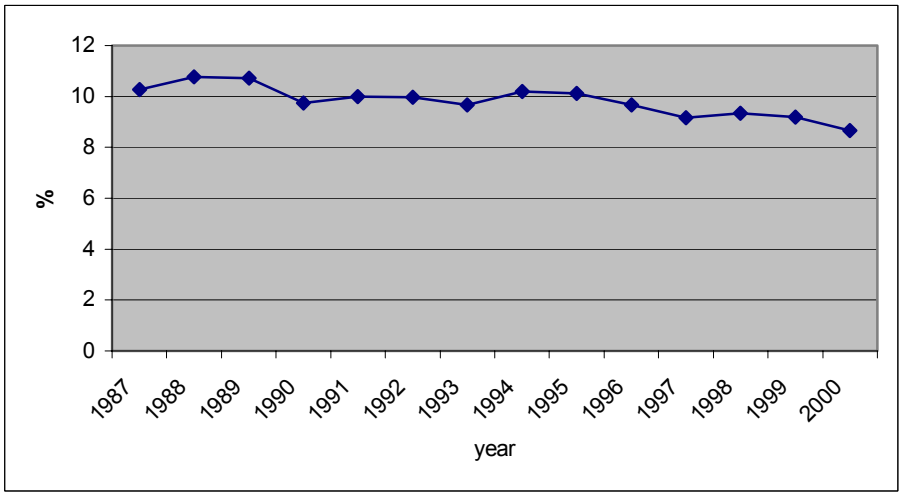
Graph 5.2.The Rate of Created Value of Manufacturing Industry of İzmir in Aegean Region



Source:SIS, İller itibariyle Gayri safi yurtiçi hasıla, Ankara

In the same way,the portion of created value of İzmir manufacturing industry in value of manufacturing industry of Turkey is decreasing in respect to years.the portion of İzmir was 10.28 % in 1987 whereas it went back to 8.64 % in 2000.

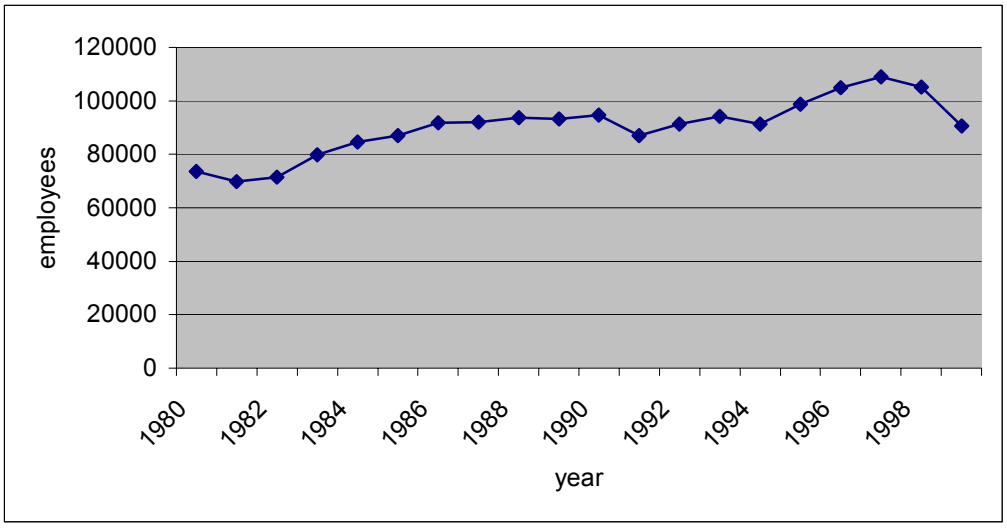
Graph 5.3. The Rate of Created Value of Manufacturing Industry of İzmir in Manufacturing Industry of Turkey



Source:SIS, İller itibariyle Gayri safi yurtiçi hasıla, Ankara

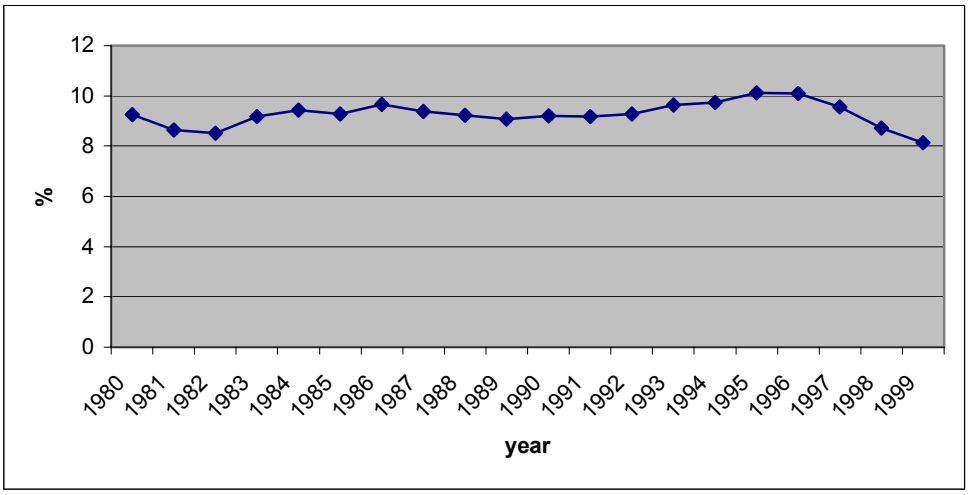
Looking at allocation of the number of employees in manufacturing industry of İzmir in employment of manufacturing industry of Turkey ,in 1980 in İzmir there were 73711 employees in manufacturing industry sector, in 1999 it was 90595.Examining development of employment so to years between 1980-1997,up to 1997 although there had been decreasing in some years ,in general employment increased.After 1997 employment started decreasing,in 1997 it went back to 108947,in 1998 to 105112 and in 1999 to 90595. The proportion of employees in manufacturing industry of İzmir to manufacturing industry of Turkey between 1980-1999 changed between 8.1 % and 10.1 %.In 1995 the rate of İzmir increased to 10.1 %,between 1995-1999 the rate of employment decreased to 8.1 %.

Graph 5.4.Employment of Manufacturing Industry in İzmir As to Years



Source:SIS, İller itibariyle Gayri safi yurtiçi hasıla, Ankara

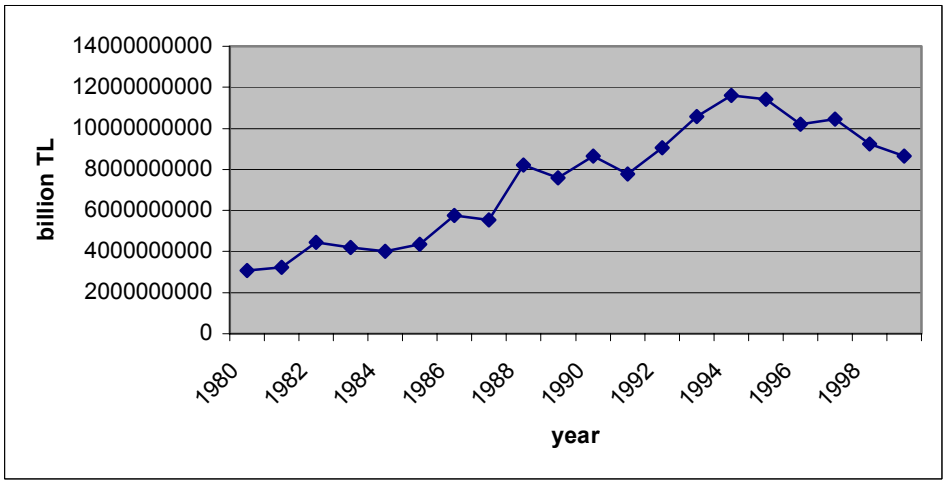
Graph 5.5. The Rate of Employees in Manufacturing Industry of İzmir to Employees in Manufacturing Industry in Turkey



Source:SIS, İller itibariyle Gayri safi yurtiçi hasıla, Ankara

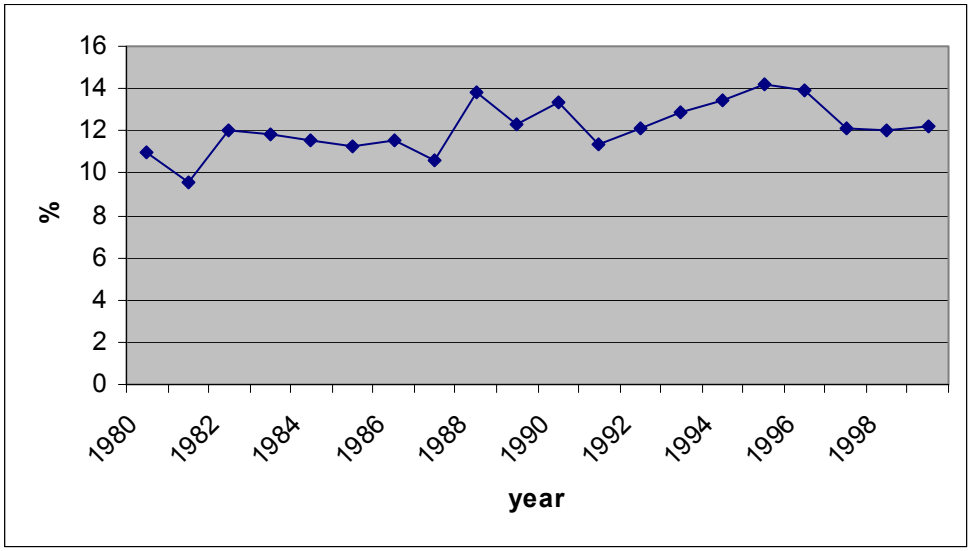
Examining the added value created by manufacturing industry of İzmir; in 1980 it was 3068 trillion TL and in 2000 it was 8657 trillion TL by 2003 unit price.Examining with regard to years , up to 1994 it increased rapidly , between 1995-1999 created added value decreased .The proportion of created added value in manufacturing industry of İzmir to Türkey between 1980-1999 changed between 9.6 % and 13.9 %. In 1999 the allocation of İzmir in Turkey was 12 %.

Graph 5.6.Created Added Value of Manufacturing Industry of İzmir by 2003 Prices



Source:SIS, İller itibariyle Gayri safi yurtiçi hasıla, Ankara

Graph 5.7.The Rate of Created Added Value in Manufacturing Industry of İzmir to Manufacturing Industry of Turkey



Source:SIS, İller itibariyle Gayri safi yurtiçi hasıla, Ankara

In conclusion, the graphs of employment and created added value of manufacturing industry of İzmir shown great similarities to graphs of Turkey.

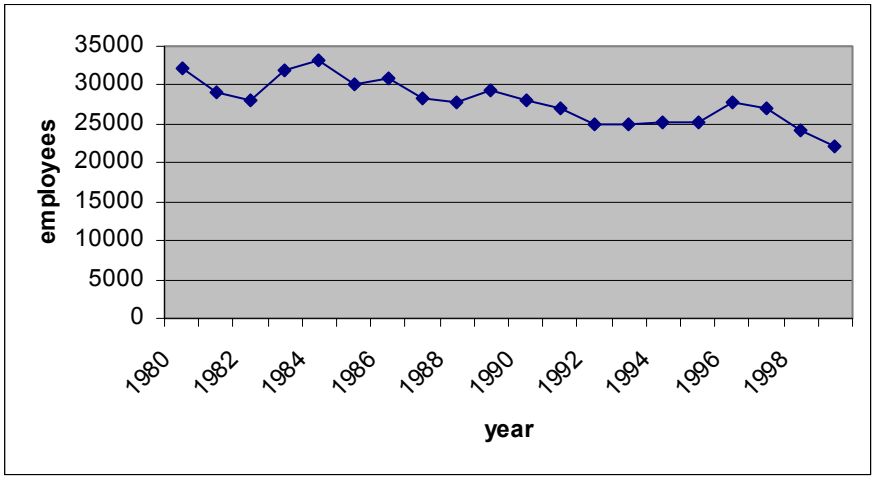
5.2 Sectoral Development of Manufacturing Industry

The development of employment and created added value of nine sectors in manufacturing industry between 1980-1999 were examined.

Food,drink and tobacco industry:

Examining employment datas of food,drink and tobacco industry sector between 1980-1999, in general employment was on trend of decreasing, the number of employees was 32178 in 1980 ,whereas it went down to 22206 in 1999, there was a small increase in employment between 1982-1984,1989 and 1993-1996 but in other years employment went down.However it was the sector that provided the highest employment in 1999.

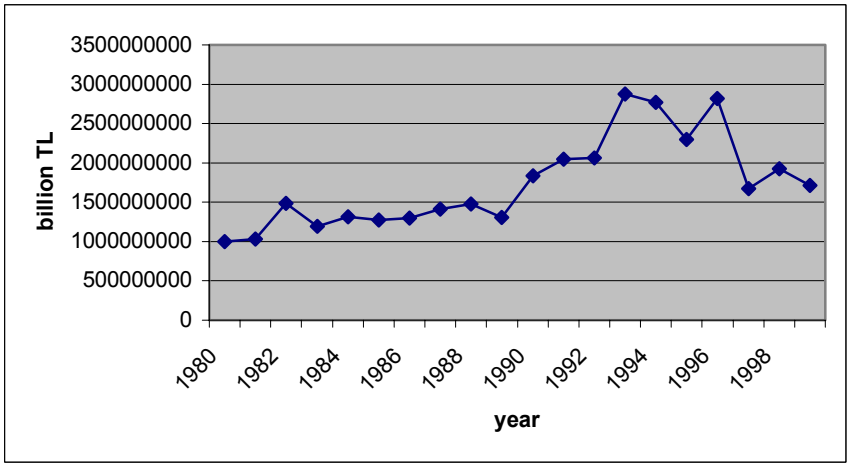
Graph 5.8. The Number of Employees in Food,Drink And Tobacco Industry Sectors Between 1980-1999



Source:SIS

Examining the change of created added value as to years between 1980-1999, conversely to falling trend in employment, created added value had rising trend. While added value in general was 996 trilion TL in 1980,it increased to 1710 trillion TL in 1999. Between 1980-1993 a rapid icrease in added value was seen but between 1993-1999 there was a decrease.

Graph 5.9. Added Value in Food,Drink and Tobacco Industry Sector Between 1980-999

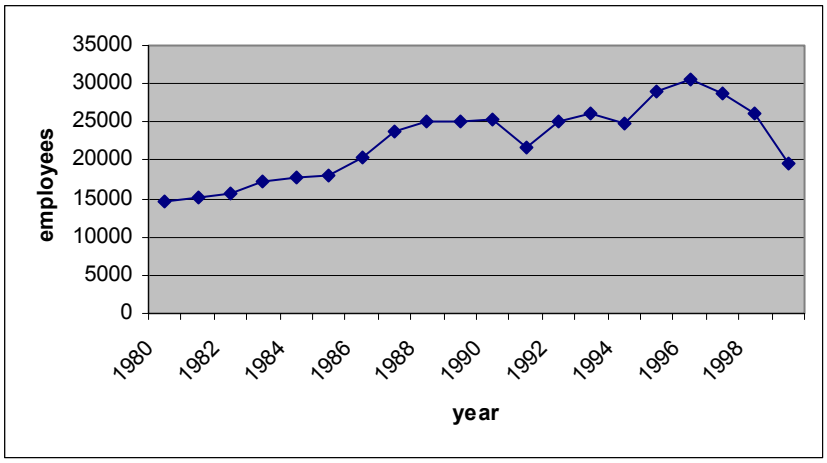


Source:SIS

Weaving,clothing and leather industry:

Examining employment datas of weaving,clothing and leather industry sector between 1980-1999; in general employment was on trend of increase, the number of employees was 14702 in 1980 whereas it went up to 19509 in 1999.It was seen that there was an increase in employment between 1980-1996 but there was a decrease between 1996-1999.

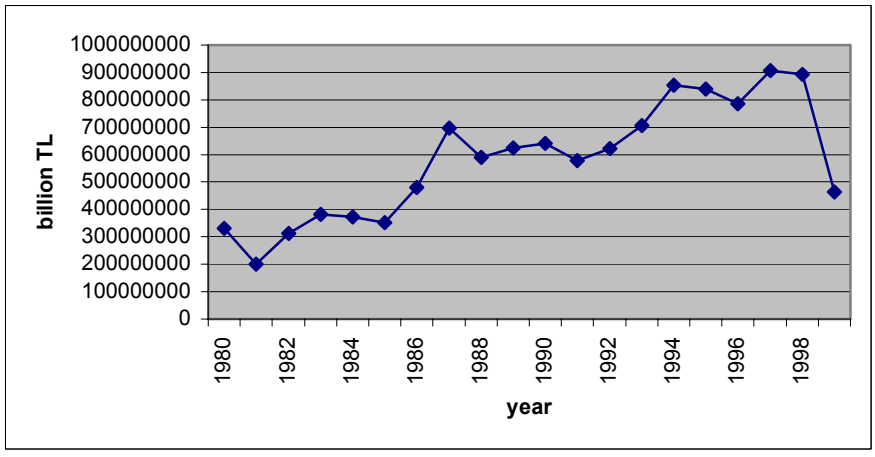
Graph 5.10. The Number of Employees in Weaving,Clothing and Leather Industry Sector Between 1980-1999



Source:SIS

Examining the change of created added value as to years,in general added value had a rising trend.In 1980 added value was 332 trillion TL whereas it went up to 463 trillion TL in 1999.Between 1980-1998 there was an icrease in added value but in 1999 a rapid decrease was seen.

Graph 5.11. Added Value in Weaving,Clothing and Leather Industry Sector Between 1980-1999

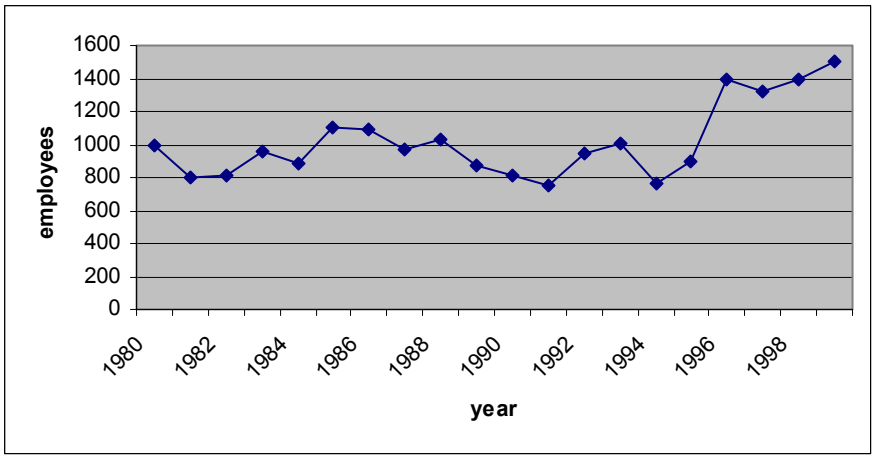


Source:SIS

Wood products and furniture industry:

Examining employment datas of wood products and furniture industry sector between 1980-1999, in general employment was on trend of increase.The number of employees was 1000 in 1980 whereas it went up to 1507 in 1999.It was seen that between 1980-1995 there was not a big change in employment but between 1995-1999 there was an increase in employment.

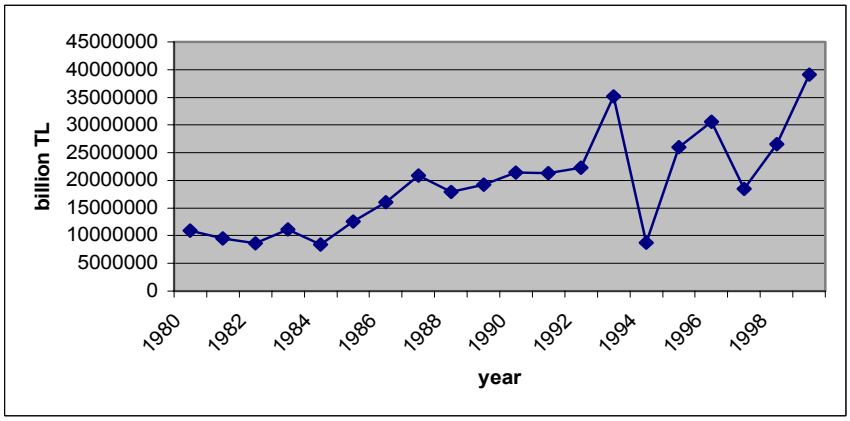
Graph 5.12. The Number of Employees in Wood Products and Furniture Industry Sector Between 1980-1999



Source:SIS

Examining created added value as to years, in general created added value was on increase trend. The added value was 10.8 trillion TL in 1980 whereas it went up to 39 trillion in 1999.There was an increase in added value between 1989-1993 but in 1994 a rapid decrease was seen however between 1994-1999 there was an increase in added value.

Graph 5.13. Added Value in Wood Products And Furniture Industry Sector Between 1980-1999

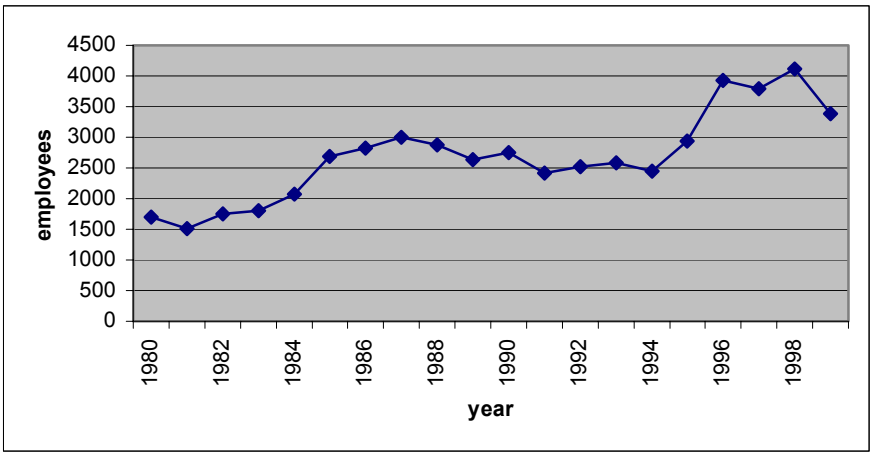


Source:SIS

Paper-paper products and printing industry:

Examining employment datas of paper-paper products and printing industry sector between 1980-1999, in general employment was on trend of increase. The number of employees was 1693 in 1980 whereas this number went up to 3381 in 1999. It was seen that between 1980-1987 there was arapid increase in employment, between 1987-1994 there was a small decrease and between 1994-1998 there was an increase again.

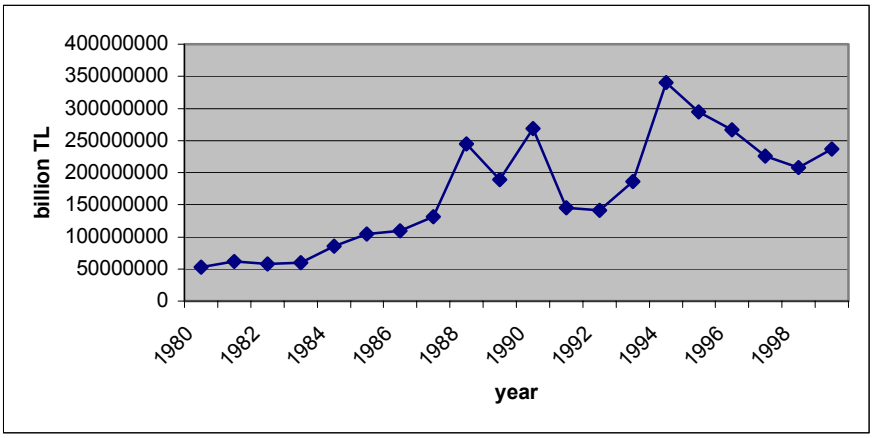
Graph 5.14.The Number of Employees in Paper-Paper Products and Printing Industry Sector Between 1980-1999



Source:SIS

Examining created added value as to years, in general created added value was on increase trend. The added value was 53 trillion TL in 1980 whereas it went up to 236 trillion TL in 1999. Between 1980-1994 except 1989,1991,1992 added value increased but between 1994-1998 a rapid decrease was seen and in 1999 there was an increase again.

Graph 5.15.Added Value in Paper-Paper Products and Printing Industry Sector Between 1980-1999

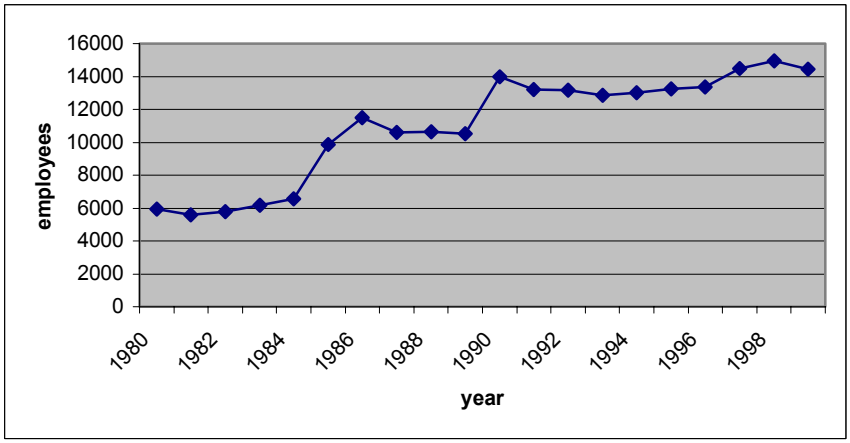


Source:SIS

Chemistry-oil,coal,rubber and plastic products industry :

Examining employment datas of chemistry-oil,coal,rubber and plastic products industry between 1980-1999, in general employment was on trend of increase. The number of employees was 5926 in 1980 whereas it went up to 14441 in 1999.

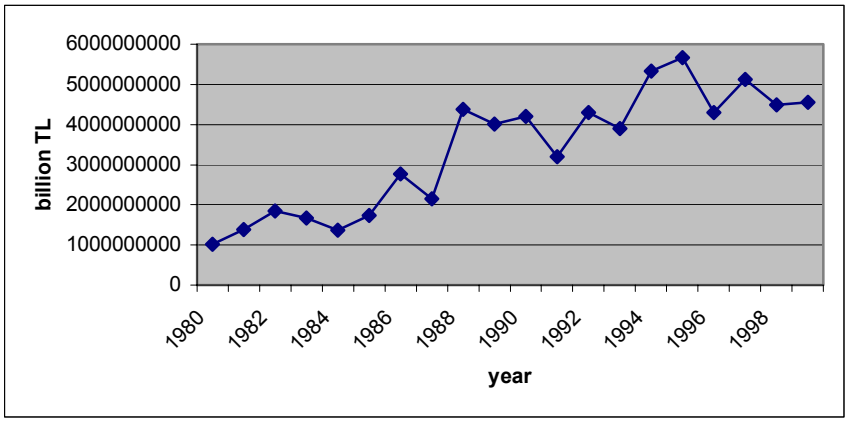
Graph 5.16.The Number of Employees in Chemistry-Oil,Coal,Rubber and Plastic Products Industry Sector Between 1980-1999



Source:SIS

Examining created added value as to years, in general created added value was on increase trend. The added value was 1014 trillion TL in 1980 but it went up to 4550 trillion TL in 1999. It was seen that between 1980-1999 in general the added value increased but in 1996 there was a rapid decrease and between 1996-1999 there was not an important change.This is the sector that creates the highest added value.

Graph 5.17.Added Value in Chemistry-Oil,Coal,Rubber and Plastic Products Industry Sector Between 1980-1999

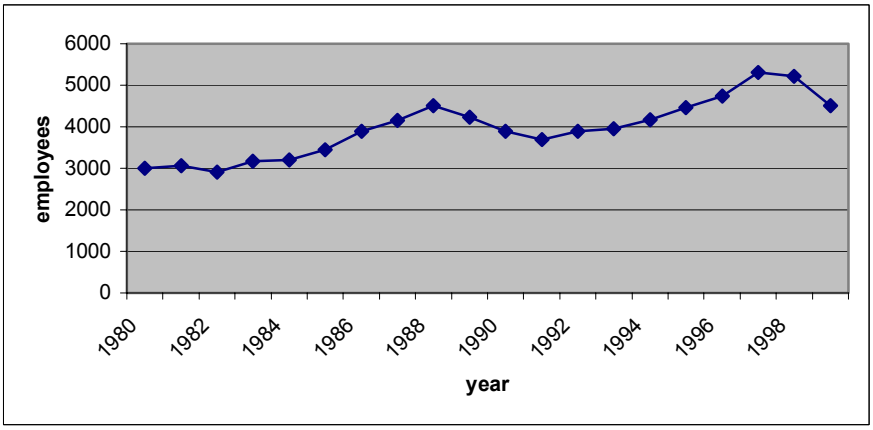


Source:SIS

Stone and soil related industry:

Examining employment datas of stone and soil related industry sector between 1980-1999, in general employment was on trend of increase. The number of employees was 3006 in 1980 but it went up to 4512 in 1999.

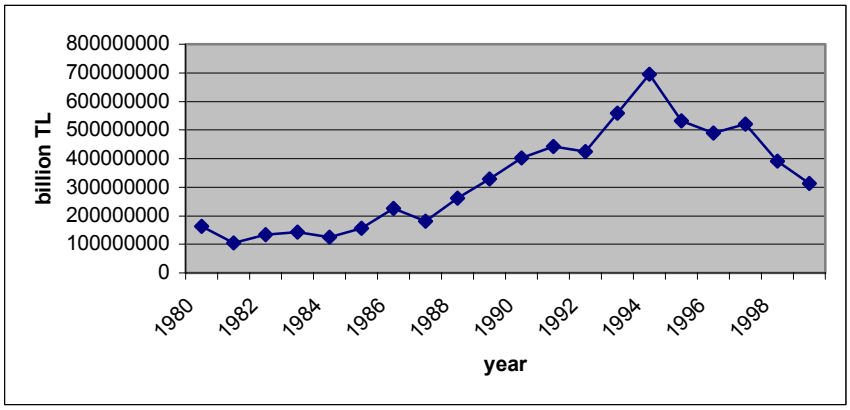
Graph 5.18. The Number of Employees in Stone and Soil Related Industry Sector Between 1980-1999



Source:SIS

Examining created added value as to years, in general created added value was on increase trend. The added value was 162 trillion TL in 1980 but it increased to 311 trillion TL in 1999. Between 1980-1994 there was an increase in added value whereas there was a decrease in added value between 1994-1998.

Graph 5.19. Added Value in Stone and Soil Related Industry Sector Between 1980-1999

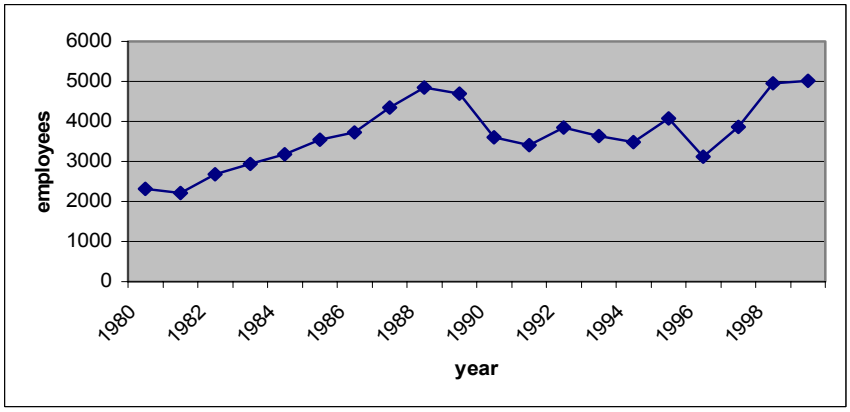


Source:SIS

Metal main industry:

Examining employment datas of metal main industry sector between 1980-1999, in general employment was on trend of increase. The number of employees was 2320 in 1980 whereas it increased to 5019 in 1999.Between 1980-1988 employment increased rapidly but between 1988-1996 it decreased and between 1996-1999 it increased again.

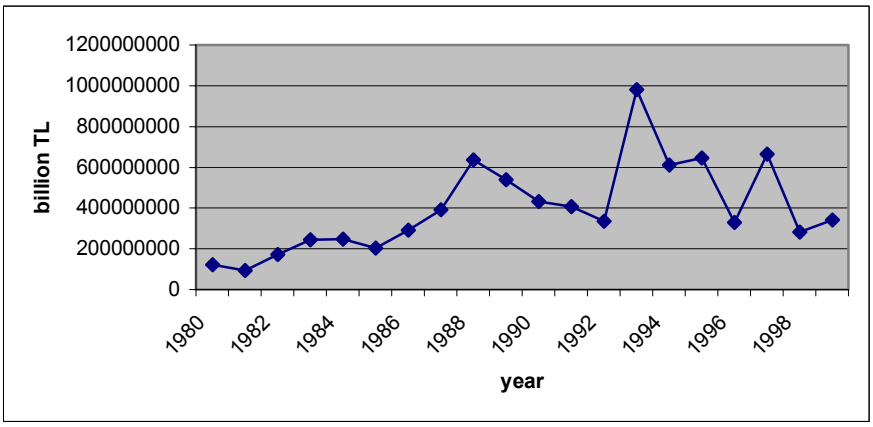
Graph 5.20.The Number of Employees of Metal Main Industry Sector Between 1980-1999



Source:SIS

Examining created added value as to years, in general created added value was on increase trend. Added value was 122 trillion TL in 1980 but it went up to 340 trillion TL in 1999.Between 1980-1993 except the period between 1998-1992 added value was on an increase trend but between 1993-1998 it decreased and in 1999 there was a slight increase.

Graph 5.21. Added Value in Metal Main Industry Sector Between 1980-1999

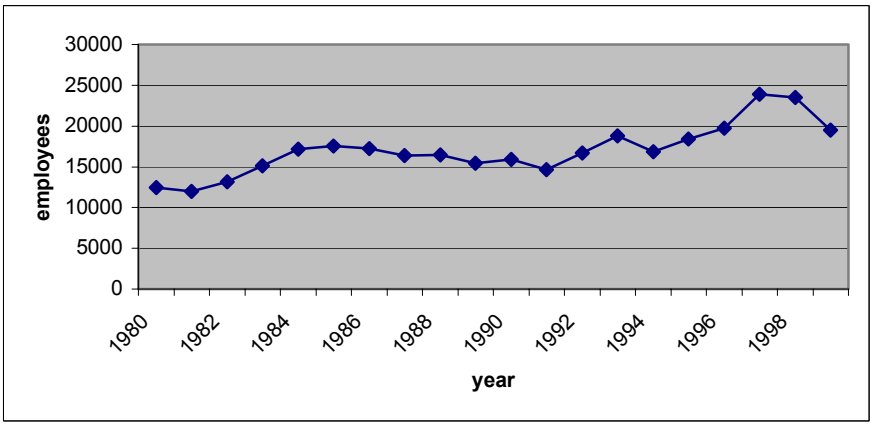


Source:SIS

Metal objects-machine equipments, transportation vehicles, scientific and Professional measurement devices

Examining employment datas, in general employment was on trend of increase.The number of employees was 12479 in 1980 but it increased to 19513 in 1999.The employment increased between 1980-1997 but it decreased in 1997-1999.

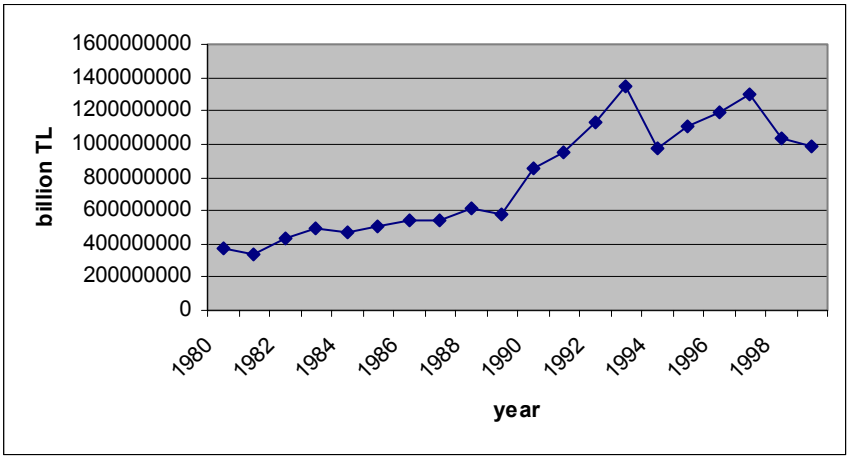
Graph 5.22. The Number of Employees of Metal Objects-Machine Equipments, Transportation Vehicles, Scientific and Professional Measurement Devices Sector Between 1980-1999



Source:SIS

Examining created added value as to years, in general created added value was on increase trend. Added value was 340 trillion Tl in1980 whereas it increased to 992 trillion TL in 1999.It was seen that added value increased between 1980-1993 but it decreased in 1993-1999.

Graph 5.23. Added Value in Metal Objects-Machine Equipments, Transportation Vehicles, Scientific And Professional Measurement Devices Sector Between1980-1999

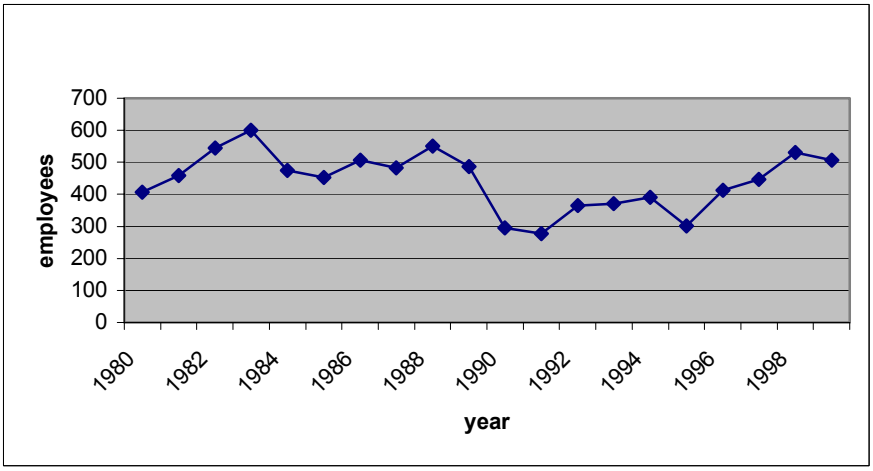


Source:SIS

Other manufacturing industry:

Examining employment datas, in general employment was on trend of decrease.But the number of employees was 407 in 1980 but it went up to 507 in 1999.

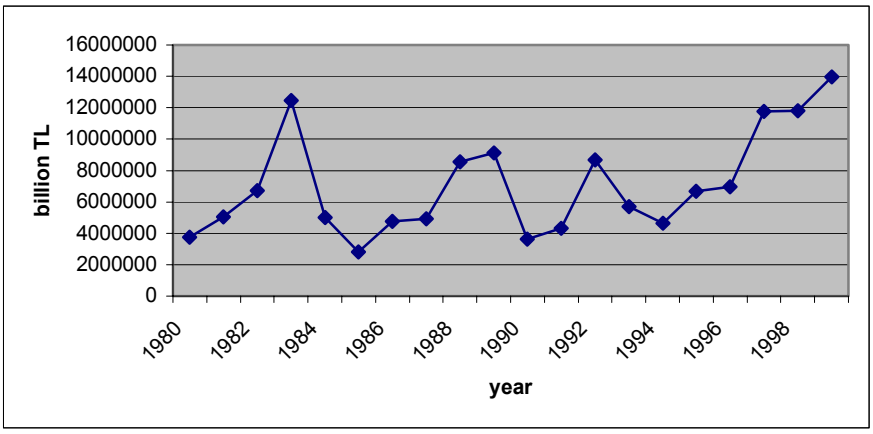
Graph 5.24. The Number of Employees in Other Manufacturing Industry Sector Between 1980-1999



Source:SIS

Examining created added value as to years, in contrast to decrease in employment in general created added value was on increase trend.The added value was 3.7 trillion TL in 1980 whereas it increased to 14 trillion TL in 1999.

Graph 5.25. Added Value in Other Manufacturing Industry Sector Between 1980-1999



Source:SIS

5. 3. Development of Industrial Estate

The first thought of establishing industrial estate in İzmir was in 1968 during studies of Master Plan of İzmir. The Project of 1 / 25 000 scale Master Plan of İzmir completed on January 4th, 1973 and Aegean Region Chamber of Industry (EBSO) expressed the importance and necessity of establishing an industrial estate. In meeting on October 24th, 1976 the ministry committee agreed on establishing an industrial estate in İzmir. The request of Aegean Region Chamber of Industry to be enterprising organization became fact on September 21st, 1978 After obtaining these authorities, Aegean Region Chamber of Industry prepared settlement plans and feasibility reports and on June 24th, 1980 the first plot was had from land Office (İzmir Atatürk Industrial Estate Report, 2002, page 1). Infrastructure works began on September 9th, 1982 and completed on May 20th, 1990 with an opening ceremony.

İzmir-Menemen leather industrial estates established in 1988 as second industrial estate. Leather industry establishments, that had been present for long period around İzmir-Yeşildere, were decided to continue their work in a more productive region not only because of environment pollution they cause but also new motorways and legal expropriation works which would be more useful.

For this reason leather industrialist, who gathered in Yeşildere-İzmir, established a cooperative called ‘Limited Responsible Construction Cooperative of İzmir Leather

Industrialists' in 1984 with 138 partners. Afterwards they bought a building plot 3, 5 km far away from Menemen- Maltepe village according to settlement plan. And also they prepared treatment plant, drinking water, sewer system, road and energy projects. (www. idosb.org.tr)

After the work carried on cooperatively with the ministry of industry and commerce, in 1988 it was taken to the government program as 'İzmir Leather Industrial Estate' and consisting of İzmir governorship, province special management directorate, Aegean region chamber of industry and cooperative, enterprising organization was formed (www. idosb. org. tr).

Infrastructure works started in 1988 and completed in 1997. Total land is consisting of 189 plots with 200 hectare. According to data in 2002, there 102 industry establishments carrying out their work.

90 % of investment expenditure of industrial estates -13,035 trillion Turkish lira- was provided from a loan from the ministry of industry of commerce.

In order for the estates to become more attractive and increase its exporting, it was decided in 1998 to be free zone. The objectives of free zones are fairly different from industrial estates on administrative structure, criterions for location selection and activities allowed in the zone. In industrial estates only industry manufacturing establishments are allowed to be established, whereas in free zones manufacturing, banking, selling insurance, storing and commerce activities are allowed. Besides, industrial estates are established and runned under the authority of the ministry of industry and commerce but free zones are established and runned under the authority of premiership of permanent undersecretary external commerce. Because of differences I mentioned above, Menemen leather free zone was not kept in coverage of work.

In İzmir there are 20 industrial estates that are active and on site analyses-project stage in total. One of them is active and has completed infrastructure work, 6 industrial estates are on the stage of construction and 13 industrial estates are on the stage of site analyses and project. Tablo 5.1. is indicating the stage of industrial estates

Table 5.1. Stage of Industrial Estates

Active industrial estates	**Founders**
-İzmir Atatürk Industrial Estate	EBSO
Industrial estates on the stage of construction	
Tire industrial estate	EBSO
Kınık industrial estates	EBSO
Aliağa Industrial estate	EBSO
İzmir-Buca (Aegean Clothing) industrial estate	Aegean Clothing Industry Association
Tekeli manufacturing industrial estate	The Chamber of İzmir Industry
Kemalpaşa industrial estate	EBSO
Industrial estates on site analyses project stage	
-Ödemiş industrial estate -Bergama industrial estate -İzmir Aliağa Pektim /Chemistry industrial estate -İzmir Aliağa 2 industrial estate -Menemen (plastic) industrial estate -İzmir centre (mermerciler) industrial estate -Kiraz industrial estate -Torbalı I industrial estate - Torbalı II (beet) industrial estate -İzmir Bayındır (food) industrial estate -Seferihisar Teknopark industrial estate -Kemalpaşa 2 (widening) industrial estate	EBSO
Çiçekçilik specialized industrial estate	The Chamber of İzmir Commerce

18 of established 20 industrial estates in İzmir are established with pioneering of EBSO, 2 of them are established with pioneering of The Chamber of İzmir Commerce and one is established with pioneering of Aegean Clothing Industry Association. With pioneering of these institutions province special management, the chamber of local

commerce and industry and local municipalities participated to enterprising organization. Information related to this subject is indicated in table 5.2

In 1993 preparing 'Aegean planned development model', Aegean Region chamber of industry offered to public opinion. The dynamic factor and fascinating power of the report is industrialization on axis of industrial estates. Examining established industrial estate through years, particularly between 1997-2000 there is a great increase in number of industrial estate. 15 industrial estates were established during this period. Four industrial estates out of other five were established between 1990-1996 and one was established in 1976.

Although, in development plans specialized industrial estates were aimed to be established in big cities like İzmir, only six of industrial estates established and decided to be established are specialized. These industrial estates are İzmir Aliağa pektim/chemistry, Menemen (plastic), İzmir centre (mermerciler), Bayındır (food), İzmir-Buca (Aegean clothing) and çiçekçilik specialized industrial estates. But out of all them only construction works of infrastructure of Buca (Aegean clothing) industrial estate are about being completed. Since works in the other industrial estates are going on stage of site analysis, infrastructure construction has not started yet.

Table 5.2. General information of Industrial Estates in İzmir

	Name of industrial estate	District	Establisment year	state	size (Ha)	Size of İndustry plot (Ha)	Number of industry plot
1	İzmir Atatürk Industrial Estate	Çiğli	1976	Active.started infrastructure in 1982 , completed in 1990	631	400	495+100
2	Tire Industrial Estate (TOSBİ)	Tire	1993	Construction of infrastructure is going on	410	280	264
3	Ödemiş Industrial Estate	Ödemiş	1995	Expropriation and studies on project are going on	100+200	52,25	50
4	Bergama Industrial Estate	Bergama	1997	Expropriation and studies on project are going on	174	95,5	51
5	Kınık Industrial Estate	Kınık	1997	Construction of infrastructure is going on	81	47,23	60
6	Aliağa Industrial Estate (ALOSBİ)	Aliağa	1997	Projects of infrastructure are going on	922	470,43	397
7	İzmir Aliağa Pektim Chemistry Industrial Estate	Aliağa	1998	Location selection was not done.on the stage of site analysis	78,7		
8	İzmir-Aliağa 2 Industrial Estate	Aliağa	1999	Location selection was done	400		
9	Menemen (Plastic) Industrial Estate	Menemen	1999	Location selection was done. On the stage of ÇED	92		
10	İzmir Mermerciler Industrial Estate		1999	Location selection was not done. On the stage of site analysis.			
11	Kiraz Industrial Estate	Kiraz	1999	Location selection was done	85		
12	Torbalı Industrial Estate	Torbalı	1996	Location selection was done, not approved yet	260	208	116
13	Torbalı (Pancar) 2 Industrial Estate	Torbalı	2000	Location selection was done. Started infrastructure in , will be completed in 2007	128		
14	İzmir-Bayındır Industrial Estate	Bayındır	2000	Location selection was done	215		
15	İzmir-Buca (Agean clothing) Industrial Estate	Buca	2000	Location selection was done	53,4		
16	Seferihisar Tecnopark Industrial Estate	Seferihisar	2000	Location selection was done	500		
17	Tekeli İmalat Industrial Estate	Menderes	1999	Construction of infrastructure is going on	195		319
18	Kemalpaşa Industrial Estate (KOSBİ)	Kemalpaşa	1990	Studies on project are going on	410		301
19	Kemalpaşa 2 (widening) Industrial Estate	Kemalpaşa	1999	Location selection was done	270+530		
20	Çiçek Industrial Estate		1999	On the stage of site analysis.			

Source: The report of location selection committee of industrial estates

	Name of industrial estate	Dominant 3 sectors in industrial estate	Founder partners and participating shares	Number of members in industrial estate	Active industry establishment
1	İzmir Atatürk Industrial Estate	Textile,food, electric-electronic			423
2	Tire Industrial Estate (TOSBİ)	Textile,food,olive oil	Ebso:%70, İzmir province private administration.:%15, Tire municipality:%15	101	14
3	Ödemiş Industrial Estate	Food, agriculture machine construction equipment	Ebso:%25, İzmir province private administration.:%25, Kaymakçı municipality:%25, Ödemiş, The chamber of commerce.%25	22 members-28 boş	none
4	Bergama Industrial Estate	Textile, cotton gin, machine	Ebso:%70, izmir province private administration:%15, bergama, the chamber of commerce:%15	45 permanent-8 spare	none
5	Kınık Industrial Estate	Textile , ready-to-wear clothing, construction	Ebso:%40, izmir province private administration:%30, kınık municipality:%30	15 permanent – no spare member	3
6	Aliağa Industrial Estate (ALOSBİ)	Machine manufacturing, textile, Plastic	Ebso:%70, İzmir province private administration:%15, Aliağa The chamber of commerce:%15	277 permanent -12 spare	none
7	İzmir Aliağa Pektim Chemistry Industrial Estate	Petkim products	Ebso:%40, İzmir province private administration:%20, Aliağa, The chamber of commerce:%20,Aliağa Bel:%20		none
8	İzmir-Aliağa 2 Industrial Estate				none
9	Menemen (Plastic) Industrial Estate				none
10	İzmir Mermerciler Industrial Estate				none
11	Kiraz Industrial Estate				none
12	Torbalı Industrial Estate	Leather, ready-to-wear clothing, wooden products	Ebso:%70,izmir province private administration.:%15,torbalı, the chamber of commerce.:%15,	248	none
13	Torbalı (Pancar) 2 Industrial Estate	Machine,wood, leather and industry	Ebso:%70,izmir province private administration.:%14,torbalı, the chamber of commerce.:%8,pancar municipality:%8	75	none
14	İzmir-Bayındır Industrial Estate				none
15	İzmir-Buca (Agean clothing) Industrial Estate	Ready-to-wear clothing	Limited accountable aegean clothing ındustrialists :85 % land and construction cooperative, izmir province private administration.:%10, buca municipality: %5		8
16	Seferihisar Tecnopark Industrial Estate				none
17	Tekeli İmalat Industrial Estate	Trade+construction equipments plastic, wood	The chamber of commerce	number of present participants is 319	none
18	Kemalpaşa Industrial Estate (KOSBİ)	Chemistry,food, machine	Ebso:%70, izmir province private administration.:%25	174	150
19	Kemalpaşa 2 (widening) Industrial Estate				none
20	Çiçek Industrial Estate	Production of cut flower	The chamber of commerce		none

Total extent of industrial estates that are active is 631 hectares and total extent of industrial estates that are on stage of construction and site analyses-project is 4624 hectares. This extent does not include Kemalpaşa II (widening) industrial estate because location selection of widening 530 ha has not been approved; and does not include İzmir centre and Çiçekçilik specialized industrial estates since their location selections have not been done and size of the land is not certain yet. Total land of industrial estates on construction stage is 2121.4 ha. Industrial estates that are active and on stage of construction and site analyses-project have 5205 ha excluding Centre Mermerciler and Çiçekçilik specialized industrial estates.

In industrial estates in İzmir 598 industry establishments in total are manufacturing. 423 of them are in Atatürk Industrial estate, 14 in Tire industrial estate, 3 in Kınık industrial estate, 8 in Buca (Aegean clothing) industrial estate and 150 in Kemalpaşa industrial estate.

Examining table 5.2 Bergama and Ödemiş industrial estates in 2005, Tire, Aliağa, Bayındır (food), Buca (Aegean clothing), Seferihisar Teknopark, Torbalı II, Kemalpaşa II (widening) Tekeli manufacturing and Çiçekçilik specialized industrial estates in 2004; Torbalı I, Kınık, Aliağa Pektim/chemistry, Aliağa II, Kiraz, Centre (Mermerciler) , Menemen (plastic) industrial estates in 2003 have been planned to be completed and go into operation. However, considering the stage of infrastructure works and financial state; Tire, Buca (Aegean clothing), Tekeli manufacturing industrial estates in 2004 and Aliağa industrial estates in 2005 may have their infrastructure work completed. Project and expropriation studies of Ödemiş , Bergama, and Torbalı II industrial estates are continuing but infrastructure constructions have not started yet. Since in Torbalı I, Aliağa Pektim / chemistry, Aliağa II, Kiraz, Centre (Mermerciler), Menemen (plastic), Bayındır (food), Seferihisar Teknopark and Kemalpaşa II (widening) industrial estates works are being carried out on stage of site analyses, it seems impossible to complete infrastructure constructions on determined time have them go into operation.

Table 5.3. Start and Finish Date and the Amount of Given Loan of Industrial Estates

	Name Of The Work	START-Finish Date	Loan (%)	Characteristic	AMOUNT LOAN GIVEN (Billion TL)		
					External	Total	In 2002
COMPLETED							
1	Merkez Atatürk	1980-1992	90	600 Ha	8, 5	18, 3	28. 314
2	Menemen Deri	1988-1997	90	200Ha(+ARITMA)	39, 1	140, 9	13. 035
Continuing					**Cost Of Project** External	TOTAL	**Appropriation Of Program İn 2002**
1	Kemalpaşa Treatment *	1991-2005	95	treatment (410Ha)	--	500	50
2	Tire	1993-2004	95	400 Ha	--	7. 900	750
3	Ödemiş	1994-2005	95	300 Ha (100 Ha)	--	7. 500	750
4	Menemen Leather Ii Art.	1997-2002	95	treatment (200 Ha)	--	100	100
5	Torbali I	1996-2003	95	analysis	--	--	1
6	Bergama	1996-2005	95	175 Ha	--	4. 375	800
7	Kinik **	1996-2003		85 Ha	--	--	--
8	Aliağa I **	1998-2004		922 Ha	--	--	--
9	Aliağa (Chemistry)**	1998-2003		analysis	--	--	--
10	Aliağa Ii**	1999-2003		analysis	--	--	--
11	Kiraz **	1999-2003		analysis	--	--	--
12	Merkez (Mermerci.)**	1999-2003		analysis	--	--	--
13	Menemen (Plastic)**	1999-2003		analysis	--	--	--
14	Bayindir (Food) **	2000-2004		analysis	--	--	--
15	Buca (Ege Clothing)**	2000-2004		55 Ha (Kamulaş)	--	--	--
16	Seferihisar (Technopark)**	2000-2004		analysis	--	--	--
17	Torbali Ii **	2000-2004		130 ha (Kam)	--	--	--
18	Kemalpaşa I (Widening) **	2000-2004		analysis	--	--	--
19	Tekeli Manufacture **	2000-2004		195 Ha (Kam)	--	--	--
20	Çiçekçilik	2001-2004		analysis	--	10	9

*all expropriation and investment expenses except treatment plants are covered by enterprising committee.
** analysis, expropriation and investment expenses are covered by enterprising committee
Source: The Misnitery of Industry and Trade

The fact that industrial estates on construction and site analyses-project stage went beyond the aimed date resulted from the economic crisises in 2000 and their effects. After these crisises there have been a great number of decreases in number of members of industrial estates. Furthermore, directorates of industrial estates started to meet difficulties of collecting membership fees.

90 % of total investment costs of Tire, Ödemiş, Torbalı, and Bergama industrial estates; 95 % of costs of treatment plant of Kemalpaşa and Menemen Leather Industrial Estates were decided to be provided with loans from the ministry of industry and commerce. These industrial estates used some loans from the ministry of industry and commerce. But expropriation and investment costs of other industrial estates will be covered by enterprising organization (www.sanayi.gov.tr)

In 1993, according to 'Aegean planned development model' prepared by EBSO, it was decided for industrial estates to become widespread throughout province accepting that industrial estates in İzmir would play pioneer role and speed up industrialization. So 18 industrial estates were established in 10 years or decided to be established. By means of established industrial estates the industrial estates that are disorganized in the city centre, started to move to the estates and new entrepreneurs were given the chance to consider the advantages of industrial estates and to invest in these estates. However, evaluating the last stage, industrial estates did not speed up industrialization as expected, the demand for them was under than expected and in general can be said that practices of industrial estates in İzmir have been unsuccessful. The reasons for this failure can be gathered under a few topics;

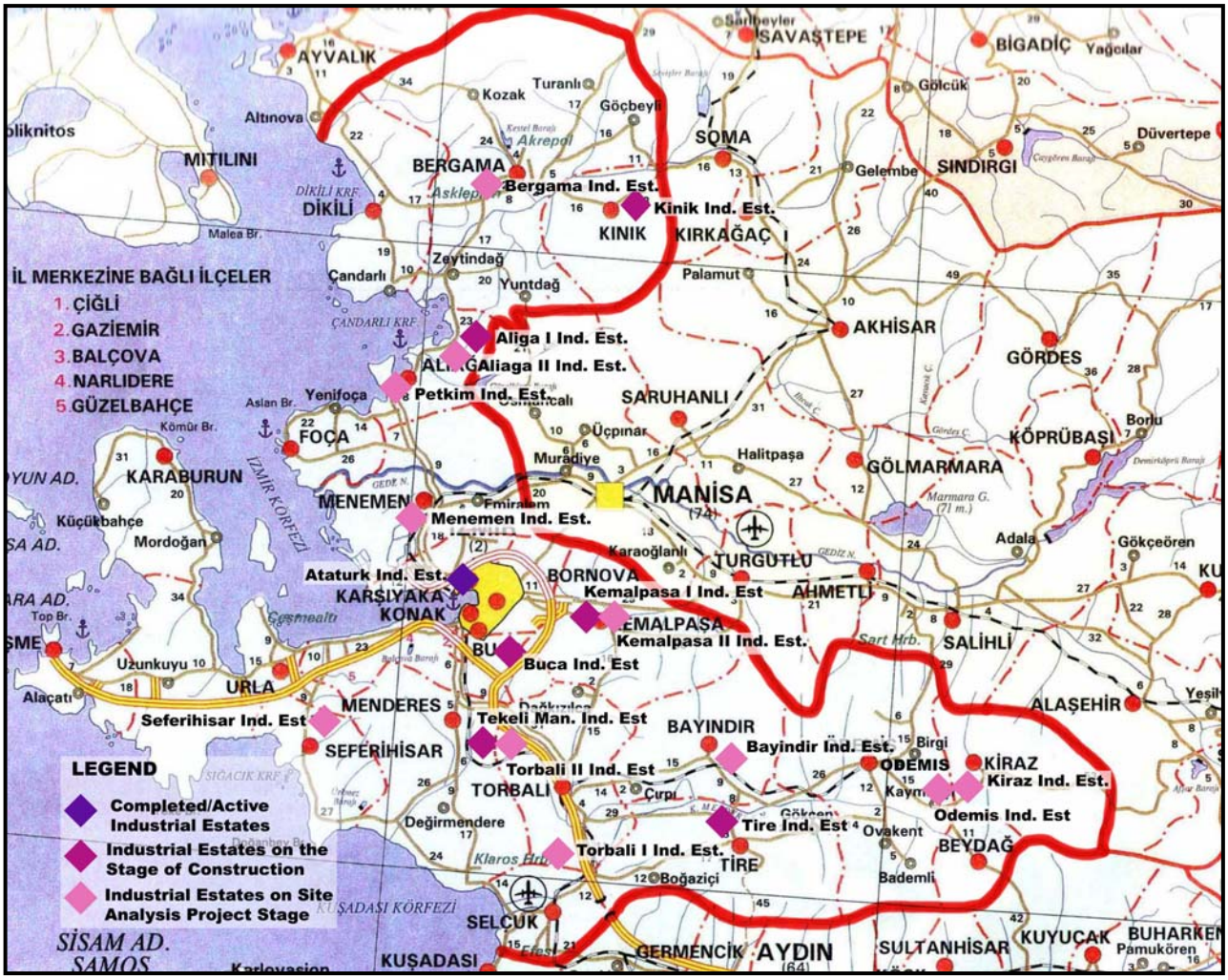
First, location selections and establishment decisions were not done according to plan, program and demands from industrialists. Every district saw the other district as rivals and made effort to establish an industrial estate in its boundary. In 10 years time industrial estates were become widespread and at least one industrial estate established for each district. Thus, İzmir had the greatest number of industrial estates in Turkey. But comparing filling rate of industrial estates, membership numbers, active industrial estates in İzmir to other provinces, İzmir is far behind most provinces. The reason for industrial estates to become widespread in İzmir is that EBSO sees industrial estates as means of taking away the land and sharing the public investments.

Second, before giving the decision of establishment an industrial estate, demand searching is not done. After giving the decision of establishment and approving location selection, if industrial estates do not have enough members they do not start infrastructure works.

Third, since it was not paid any attention to location selection, industrial estates were established on productive agricultural lands or on national treasury land giving harm to agricultural lands. Location selection committee preferred these lands because national treasury lands are cheaper.

Finally, although almost all of industrial estates in İzmir were established by EBSO, EBSO could not coordinate land demand that came from industrialists and guide it to convince industrial estates.

Figure: 5.1. Location And Stage Of Industrial Estates Established in İzmir Province



Source: Kılıckaya U, Photo archives-Represented by Ersin Türk

5. 4. Analyzing Industrial Estates

5. 4. 1. Completed Industrial Estates

İzmir Atatürk Industrial estate

The establishment of İzmir Atatürk industrial estates was decided in the Ministry Committee on October 24th , 1976. Aegean Region the Chamber of Industry became enterprising committee itself. Laying the foundation of the estate was done in 1982. The procurement of the region infrastructure construction was done January 12th, 1984. Although some firms participating in the procurement did not have sufficiency, a firm participating through the ministry offered 53, 85 % discount and got the procurement by

the approvement of the ministry. Despite of all objections of EBSO the contract was signed. But because of high discount, there was not a great work in two years time. In fact, after a while the work came to stopping point. For this reason, on December 24th, 1985 with the approval of the ministry the work discharged. In 1986 procurement was done and on December 31st, 1988 infrastructure construction completed. (İzmir Atatürk industrial estate report, 2002)

Industrial estates was established on Northwest of İzmir, on the former road of North and South of Çiğli airport. According to settlement plan, total land of Atatürk Industrial Estate is 6314000 square meter. 3500000 m2 of the land was separated for industrial plots, 500000 m2 for state railway depository, 113000 m2 for social and managerial foundations, 206000 m2 for treatment plants and energy powerhouse, 110000 m2 infrastructure reserve lands, 500000 m2 for industrial previous establishments . (İzmir Atatürk Industrial Estate Report, 2002)

Works in İzmir Atatürk industrial estate started with 90 % rate of state loan and with inspection of the ministry of commerce. Since the ministry could not provide enough sources, 90 % of infrastructure expenditures were provided from self source of industrial estate and 10 % of it from the ministry loan.

In the estate, there are 318 big plots of which sizes change between 5000-90000 m2 and 177 small plots of which sizes change between 350-750 m2 and that are for covering side industry needs of the estate. In total there are 495 industry plots. In addition to this , the land of state railway depository of which size is 500000 m2 that is present in the South of the estate was planned to be presented to industrialists because of economic crises which state railway of Turkey (TCDD) was in by the region directorate. According to subdivision plan of the estate, there are 107 industry plots of which sizes change between 1200 and 21000 m2. 57 of them sold in procurement in 2002. 50 industry plots that were left are being sold according to demands of industrialists. Approximately 5000 m2 plot with its cost of infrastructure cost an industrialist 450 billion Turkish lira (280 000 euro). 29 % of the cost (35 million / m2) is cost of the plot, 71 % of the cost (85 million / m2) is infrastructure cost. (İzmir Atatürk Industrial Estate Report, 2002)

The first foundation of industry establishment in the estate was done on August 9th, 1987 and official opening was done on May 20th, 1990 So, partly managing period started. Members who had usage permission started to receive their title deeds on November 11th, 1995. (İzmir Atatürk Industrial Estate Report, 2002)

In 1993, in the estate, that passed to complete managing period in order to complete treatment plants, there are 423 establishments manufacturing. Because of stagnant economy, 51 members completing the constructions could not do manufacturing. Table 5.4. is indicating activity state of the firms present in İzmir Atatürk industrial estate.

Table 5.4. Activity State of The Firms Present in İzmir Atatürk Industrial Estate

Activity state	**Number of establishments**	**Rate %**
Started manufacturing	423	70
Stopped manufacturing	28	5
Construction completed	23	4
Construction is going on	21	3
New plot of land	107	18
Total	602	100

Source: İzmir Atatürk Industrial Estate Report, 2002

Note: Despite the fact that Körting and Tariş factories are in boundary of industrial estate, the table does not include them. Because they are not the members of industrial estate.

Since Atatürk industrial estate is a mixed industrial estate, it has almost every sector of manufacture industry. Mostly there are establishments that manufacture in sectors such as side industry of motorized land vehicles, clothing manufacture and manufacturing of plastic and rubber products. Sectoral distribution of big firms present in the estate is indicated in the table below.

Table 5.5.Sectoral Distribution of Big Firms Present in İzmir Atatürk Industrial Estate

Sector	Number of Factory	Rate %
Manufacturing of other mineral products that are not metallic	9	2
Metal objects industry except machine and equipment	31	7
Manufacturing of machine and equipment	44	10
Manufacturing of plastic and rubber products	45	11
Manufacturing of radio, television, communication equipment and apparatus	7	2
Manufacturing of textile products	11	3
Manufacturing of tobacco products	3	1
Manufacturing of constructions and structure products	12	3
Manufacturing wood and fungus products	3	1
Main metal industry	17	4
Reproduce of recorded media such as printing, publication, record, cassette	5	1
Side industry of land vehicles	50	12
Manufacturing of electric machine and apparatus	37	9
Manufacturing of food and beverage products	28	7
Manufacturing of cloths	48	11
Manufacturing of paper and paper products	4	1
Manufacturing of chemical substance and their products	24	6
Manufacturing of furniture and other manufacture	45	11
Total	423	100

Source: İzmir Atatürk Industrial Estate Report, 2002

In the estate the sectors that do not have quality of being factory and scope of industry site such as mechanic, lumber merchant, carpenter, pit sawyer, mechanic that does not have a certain manufacture program with depot and commercial enterprise and also sectors that are unconvinced (LPG filling plants) for environment and the region were not allowed to be there.

All the industry establishments were built as one floor and 50 % of the industry plot (KAKS 0. 5) was built as covered land.

Figure 5.2 The view of İzmir Atatürk industrial estate

Source: Aksoy Y, 1999, p.247

In order for the establishments present in the estate not to get effected of limited electricity, the works of establishing electricity energy power house with 110 mw started and in the beginning Ataer energy powerhouse with 40 MW energy was established. The energy for all of the establishment is provided from this powerhouse. The capacity could be increased to 110 MW with addition powerhouse according to needs. The powerhouse is running by nafta but this year will start to run by natural gas. (İzmir Atatürk Industrial Estate Report, 2002)

In the estate, 22000 people are employed now. In fact it is estimated that it will provide 40000 employment when it gets full with the new land will be opened for industry. (İzmir Atatürk Industrial Estate Report, 2002, p.6)

The plots here cost industrialists wanting to establish industry estate too much because no precautions were taken to stop the plots be used speculatively. What it shows this is that 200 plots out of 495 have changed hands from establishment of the industrial estate up to now. In 10 % of plots industrialists are carrying on doing their manufacturing as

renters. Industrialists pay approximately $5000 for a 5000 m2- plot. In spite of the fact that the law prohibits hiring and selling the plots, directorate of industrial estates condoned this.

Since the land where İzmir Atatürk industrial estate was established does not confirm the criterions of location selection of industrial estate, it was come across to a great number of problems. Because the land of industrial estate is flat, between the South and North boundaries land filling was done to create 2 meter height difference. The reason for this was to have drainage and sewer system construction works become more attractive. Since the whole drinking and using water (until the end of 2002) was being provided from the pits, settlements started. Living on ground floors, it was come across a lot of sewer system and other infrastructure problems. Because severe rain in 2002, the stream goes through from the east of the estate overflowed. Therefore many factories in the South of the estate were flooded. In order to prevent factories from flooding, the estate directorate obtained emptying engines aimed to pour out rain water to the stream. And also in order to prevent settlements in the estate, signing a protocol with İZSU deciding on getting 60 % of needed water from İZSU and the rest 40 % from the pits in the North with control of estate directorate. The rate of salt in the earth on the estate increased because of getting too much water from underground. (İzmir Atatürk Industrial Estate Report, 2002)

5. 4. 2. Industrial Estates on Construction Stage

1. Tire Industrial Estate

Establishment January 24th, 1993

Objective of establishment: to develop industry and commerce in Tire

Size: 410 km

Highway connection: Tire-Bayındır highway side

The distance to the harbor**:** 70 km

The distance to railway: passes through Tire-Ödemiş railway

Classification of the earth: 37, 40 % first class, 23, 91 % second class, 5, 29 % third class, 0, 91 % fourth class, 3, 84 % fifth class and 28, 66 % sixth class.

The slope of the land: 8-13 %

The state of proprietorship: Tire industrial estate, EBSO, Tire municipality, general directorate of organizantions, and private proprietorship

Present land usage**:** agriculture was being done before the estate was established

Discharge: after doing treatment, it is poured out to Küçük Menderes River which is 2km far away

Providing energy: energy transfer line connected to national system with 34, 5kw pass through Tire industrial estate is ready to be used. On the estate energy transfer line completed on route 2 and 4. On the estate energy transfer is being done by underground lines to the factories.

Providing water: From three pits water is given by established distribution system to industry establishments as much as they need. A Project is being prepared with Tire municipality in case water will be needed in the future.

Effects on environment: with dominate wind it does not effect the centre of Tire but effects agriculture lands

The statue of industrial estate: In the border of Tire Municipality mucavir alan.

The amount of used loan: For infrastructure works loans that have high interest and short time were used. This loan with the interest was 10 million dollar. And also loan was obtained from the ministry of industry and commerce. The expenditures of infrastructure construction are below.

Infrastructure construction:

Investigation cost:

Infrastructure construction (1997) unit price: 2. 001. 033. 888. 800 TL

Widening land (1997) unit price: 2. 887. 083. 195. 101 TL

Total: 4. 888. 117. 083. 901 TL

Procurement cost:

Infrastructure construction (1997) unit price: 1. 050. 542. 791. 620 TL

Widening land (1997) unit price: 1. 515. 718. 677. 428 TL

Reduction of procurement: 47. 50 %

Total: 2. 566. 261. 498. 048 TL

In total 3. 692. 845. 357. 700 Tl was paid to the contractor between 1997-2002. 95 % of widening land and 25 % of infrastructure construction was completed.

Founding partners:	Participating shares
EBSO	70 %
Province private management directorate	15 %
Tire municipality	15 %

Table 5.6. Distribution of Land Usage According to Present Implementation Plan Except Two Stages

Land Usage	**Size (ha)**	**Rate (%)**
Industry area	2. 796. 094	8,8
Social building area	20. 807	,5
Management building area	10. 262	,3
Technical infrastructure area	40. 640	,0
Technical service area	17. 468	,4
Commerce area	10. 778	,3
Storing area	3. 000	,1
Gas station	11. 235	,3
Sports area	14. 172	,3
Mosque area	6. 075	,1
Green area, road, park	1. 134. 561	7,9
Total area	4. 064. 093	00,0

Source: www.tosbi.org.tr

As it can be seen in the table 5.6, 279.6 hectares in other word 69 % of total the land are for industry. This rate is more than the rate of industry plots in other industry estates in İzmir.

According to implementation plan; examining sectoral distribution of all industry plots, the sectors having land most are food products, beverage manufacture and textile products. Sectoral distribution of all industry plots is being indicated below.

Table 5.7.Sectoral Distribution of All Industry Plots

Sector	Size (m2)	Rate (%)
Manufacturing of textile products	725. 598	25. 95
Food products and beverage manufacture	586. 862	20. 99
Structure and construction equipment industry	176. 830	6. 32
Manufacturing of machine and equipment	157. 037	5. 62
Manufacturing of motorized land vehicles and trailer	145. 000	5. 19
Manufacturing of paper and paper products	140. 000	5. 00
Manufacturing of plastic and rubber products	95. 000	3. 40
Manufacturing of electric machine and equipment	75. 770	2. 71
Manufacturing wood and fungus products	56. 367	2. 02
Other manufacture	637. 630	22. 80
Total	2. 796. 094	100

Source: www.tosbi.org.tr

There are 264 industry plots in total. In 1993 when industrial estateblished, it had 240 permanent and 200 spare members but after economic crises in 2000 the number of members fell down to 101. In other words, the filling rate of industrial estate is 50.33%.

Looking at sectoral distribution of lands of which allotments was done, 11.87 % of food products and beverage manufacture and 9. 56 % of textile products manufacture has most of the land. Table 5.8 is indicating sectoral distribution of lands of which allotments was done.

Table 5.8.Sectoral Distribution of Lands of Which Allotments Done

Sector	**Land (m2)**	**Alan (%)**
Manufacture of food products and beverage	332. 125	11. 87
Manufacturing of textile products	267. 171	9. 56
Manufacturing of electrical machine and equipment	25. 000	0. 89
Manufacturing of structure and construction equipment	141. 500	5. 06
Manufacturing of machine and equipment	95. 000	3. 40
Manufacturing of motorized land vehicles and trailer	75. 000	2. 68
Manufacturing of plastic and rubber products	86. 665	3. 10
Manufacturing of paper and paper products	144. 000	5. 15
Manufacturing of chemical substance and products	25. 000	0. 89
Manufacturing of furniture	5. 000	0. 18
Manufacture of tobacco products	125. 000	4. 47
Manufacturing wood and fungus products	10. 000	0. 36
Other	75. 855	2. 71
Empty plots	1. 388. 778	49. 67
Total	2. 796. 778	100

Source: www.tosbi.org.tr

In the estates, construction of 15 industry establishments completed; 14 of them are doing manufacture and one of them is stopped temporarily. Besides, constructions of 6 firms deciding to invest are carrying on and in 5 firms Project studies are going on. In total 472 employees work in the active 14 establishments.

Figure 5.3 The view of Tire Ind. Est.

Figure 5.4 The view of Tire Ind. Est

Figure 5.5 The view of Tire Ind. Est

Figure 5.6 The view of master plan small model of Tire Ind. Est.

Source: www.tosbi.org.tr

Completed Works:

a- location selection

b- Expropriation

c-feasibility study

d-geological and geophysics analysis

e-implementation plan

f-all treatment plans projects

g- Planting saplings on environment protection band

h-some of infrastructure construction (construction of rain water, sewer system, widening plots have completed, some of construction of electricity, road, and drinking water have not completed)

i- Rough construction of infrastructure (obtaining equipments)

Work carrying on:

a-construction of infrastructure (electricity, road, drinking water and construction of treatment plants)

Works will be done:

a-management and social buildings

b-energy powerhouse

The problems of the estate:

1- Related to lands belonging to cognizants general directorate in the industrial estate there was not agreement on transfer for long time. When it was come to an agreement on transfer, because of economic insufficiency it was not done.
2- There is not enough demand for the industrial estate. Just before the crises it had 240 permanent, 200 spare members whereas now it only has 101 members.
3- Tire industrial estates could not pay the loan got from Halk Bank, of which has short time and high interest, due to the economic crises and works did not come right. So the dept has reached 10 million dollar. According to İstanbul approach, it was come to agreement with Halk Bank on paying the dept in six years time. The estate is having financial problems.
4- Since the estate directorate found the cost of construction of infrastructure too high, it wanted to rebar gain with contractor firm. Because they could not come to an agreement, contractor firm decided to leave the work. Therefore industrial estate directorate itself decided to complete the work
5- There is not enough staff for implementation process

Conclusion: The industrial estates was established on productive agriculture lands . When it starts to run, it will effect agriculture land due to dominated wind. So it can be seen that doing location selection it has not been acted fastidiously in order to protect agriculture lands. It seems possible for the estates to start running in a short time, considering that 50 % of plots were alloted, most of infrastructure completed and came to an agreement on dept with Halk Bank. (www.tosbi.org.tr)

2. İzmir-Buca (Aegean Clothing) Industrial Estate

Establishment: Limited Accountable Aegean Clothing Industrialists Land and Construction Cooperative pioneered establishment of the estate was established in 1996.It was applied to the ministry of industry and commerce through EBSO in order to have the land of the cooperative industrial estate and the permission was obtained from

the ministry of environment .On August , 2001 the ministry of industry and commerce approved the establishment of industrial estates.

The aim of establishing: To compete to İstanbul, the centre of textile in Turkey .It was formed by people who deal with textile sector in İzmir.

Size: the space of industrial estate consists of two plots with 500m distance between.the part in the South is 7.2 ha and the part in the North is 46.2 ha in total 53.4 ha.

Highway connection: it is side to the road that goes to the centre of Buca in the South.

The distance to the railway. 2km

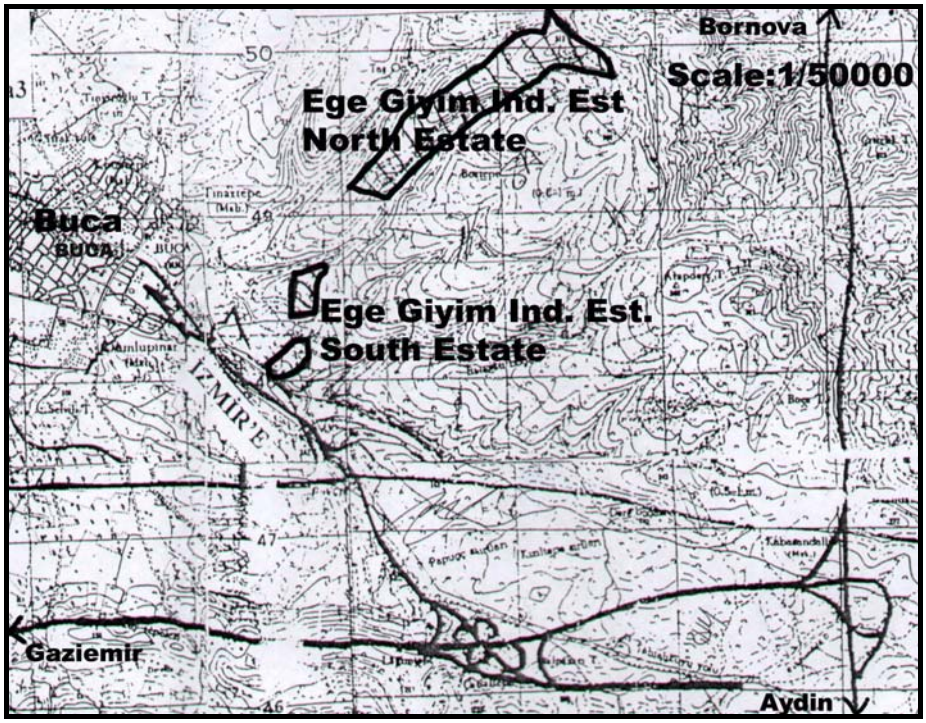
The distance to the airport**:** 10 km

The distance to the harbour: 20 km

Classification of the soil: IV class dry agriculture land

The slope of the land: The slope on the South part is 3-5 %, on the North land is 10-15%.

Figure 5.7. The location of Aegean Clothing Industrial Estate choosen by location selection committee



.Source: The Report of Location Selection Committee of Aegean Clothing Industrial Estate

The state of proprietorship: The land belonged to İzmir Bigcity Municipality, was bought by the cooperative in 1996.

Present land using:Before industrial estates was established, the land was stony and rocky so there was not agriculture on it.At the moment on the estate there are 10 industry establishments manufacturing and constructions of 10 industry establishments are going on.

Providing energy: It is obtained from the city connection.The whole construction of energy transfer line completed.

Providing water: The need for water is being covered from four pits in the industrial estates.Construction of water transfer line completed.For drinking and using water need, 2.5000 m3-water depot was constructed.

Effects to environment: Since there are activities only related to ready-made clothing business, settlement areas do not get effected with dominated wind.

Status of land of industrial estate: It is in the boundries of municipality of Buca.

The amount of loan used: The cost of the Project is 1,5 trillion Tl by the prices in 2000. The expenditures ,that done witout loan, were covered from the membership fees.

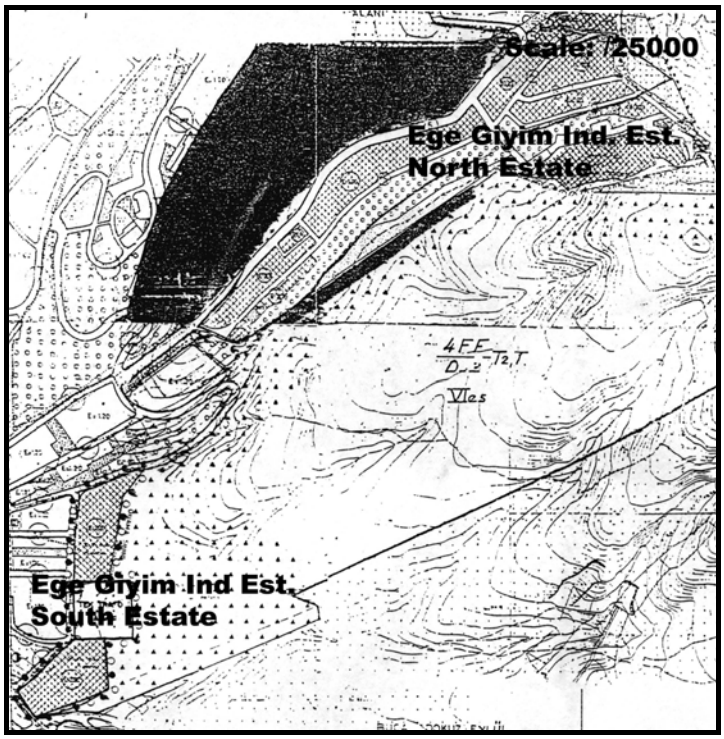
Founder partners:	Participating shares
Limited Accountable Aegean Clothing Industrialists Land and Construction Cooperative	85 %
Province private managing directorate	10 %
Municipality of Buca	5 %

Table 5.9.Distribution of Land Using According to Implementation Plan

Type of using	**Size (ha)**	**Rate (%)**
Plots of industry	27	51
Social and administrative service land	7	13
Gren area, road, parking lot	19.4	36
Total	53.4	100

Source: Directorship of indutrial estate

Figure 5.8.The master plan of Aegean Clothing Industrial Estate.



Source: The Masterplan of Aegean Clothing Industrial Estate

According to implementation plan there are 140 industry plots in the estate.All of the plots were sold. There is a great demand for the plots inthe estate. Since the estate is specialized on ready-made clothing , members do this kinds of manufacturing.

The biggest size of plots in the estate are 1000 m2 and 2000m2.The distribution of size of plots is indicating below.

Table 5.10. Distribution Size of Plots

Size of plots (m2)	Number	Rate (%)

1000	55	39
2000	80	57
4000	3	2
5000	1	1
9000	1	1
Total	140	100

Source: Directorship of Aegean Clothing Indutrial Estate

Completed works : a-implementation plan
b-buying the land
c-geological and geophysics analysis
d-the whole infrastructure project
e-electricity, sewer system, telephone, drinking and using water system and construction of the water depot completed. The roads were opened but not all of them asphalted.

Problems : 1-Since there is no enouhg staff for implementation process, licence works are being done by the municipilaty of Buca.

2-Since the land of the estate has sloping topography, the rate of industry plots is very law.

Conclusion: Due to the fact that infrastructure of the industrial estate was done by the money collected from the members and most of it completed in a short time, it was established near the city centre and it is a specialized industrial estate, there has been an enormous demand to the industry plots all of them were sold.Thus it seems so possible that the estate will get full and start running soon. (The Report of Location Selection Committee of Aegean Clothing Industrial Estate, 2000)

İzmir Tekeli Manufacturing Industrial Estate

Establishment: With the pioneering of The Chamber of Commerce of İzmir the members of the chamber established 'Limited Accountable ITOB Organized Commerce and Manufacturing Estate Overall Workplace Construction Cooperative'.

In 1999 the cooperative started work in order to established 'Tekeli Industrial Commerce and Manufacturing Estate'. Buying a 250 ha-land, 2km far from the Municipality of Tekeli, implementation plan and infrastructure projects were done. And

in February 2001 construction of infrastructure started. In order to benefit from encouragments and loans for construction of infrastructure given by the ministry of commerce and industry, it was applied to the ministry of commerce and industry in order for the region to be announced as an industrial estate. As a result, it was announced industrial estate in 2002.

The aim of establishing : with middle scale industry having development trend in İzmir, commerce activities wanted to be improved. Accordingly 'organized commerce estate' was established.

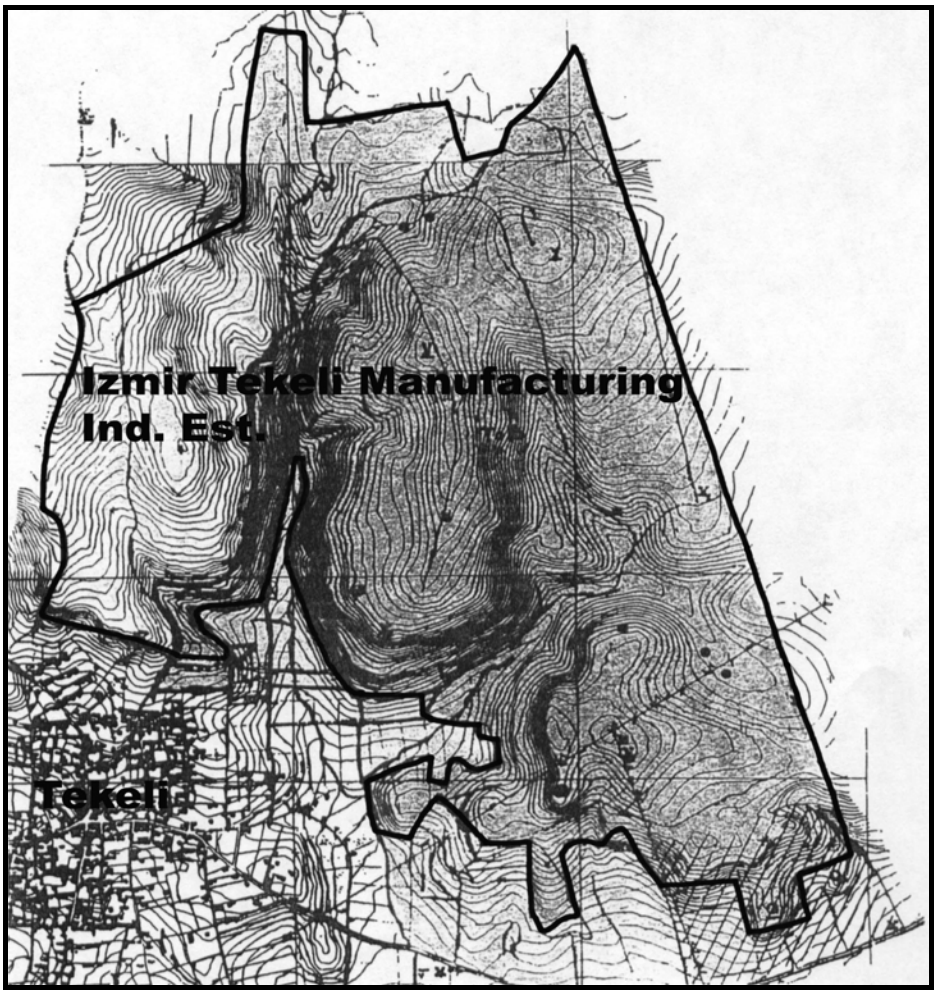
Size : The size of the land of the estate is 195 ha.The total size of land belonging to the cooperative is 250 ha.

Highway connection : It is located on the higway that connect the municipality of tekeli to Pancar settlement and on the South of İzmir-Aydın motorway.

Classification of the soil: 3.,4.and 7. class agriculture land.

The slope of the land : 10-30 %

Figure 5.9. The location of İzmir Tekeli Manufacturing Industrial Estate



Source: The Report of Master Plan of İzmir Tekeli Manufacturing Industrial Estate, 2000

Discharging : It could be delivered to Küçük Menderes.

The state of proprietorship: The whole of the land was bought by the cooperative.

Present land using : agriculture can not be done on the land.The plant cover is bush and maquis.Besides, there are two Roman observing towers and a tumulus on the estate.

Providing energy: It will be obtained from Tahtalı transformer passing 15 km from the South by the energy transport line.

Providing water: Water need will be covered by underground water pits.

Effects to environment: It does not effect settlements and Tahtalı Dam as regards dominated wind.

Status of land of industrial estate: It is in the boundries of municipality of Tekeli.

Despite the fact that Tekeli organized commerce and manufacturing estate planned for 24 ha, the size was evaluated as 195 ha by the location selection committee since

storing, commerce, residence areas and storing area that are forbidden in the implementation plan were not included. On the estate that is 240 ha, there are 438 implementation plots. The implementation based on requirements of 319 participants from İTOB partners .According to the plan the size of lands for each sector:

Table 5.11. Size of Lands for Each Sector

Sector	**Size (ha)**
Wood products-furniture	17
Shoe	13
Electric- electronic	11
Food- floury products	18
Ready-made clothing and textile	15
Machine	13
Automotive	13
Plastic	18
Construction equipments	39
Total	157

Source: İTOB Implementation Plan, Analytical Study Report, 1999

Completed works: a- location selection
b- buying the land
c- geological and geophysics analysis
d-implementation plan
e-infrastructure projects

Continuing works: construction of infrastructure

Conclusion: forbidden activities such as commerce and storing activities are being allowed to run.The estate with this circumstances has position of manufacturing and commerce industrial estate.The estate is considered to be completed in 2004. (The Report of Master Plan of İzmir Tekeli Manufacturing Industrial Estate, 2000)

Kemalpaşa Industrial Estate

Establishment : April 26th,1993

The aim of establishing : Industrialization in Kemalpaşa has not been according to a plan.Until 1975 olive oil factories were running in order to put olives that cultivated in the district in use.The first large scale factories started after 1975 are Seramik and Maysan.In 1980s number of establishments chose Kemalpaşa increased. In 1985 the ministry of prosperity and iskan approved ' Kemalpaşa Industry Master Plan' with 1 / 5 000 scale and brought it into force. Because this the plan was not obeyed, disordered industry progress continued.

In order for disordered and casual industry in Kemalpaşa to be taken under control, 60 more ha announced on the investment program in 1990.Therefore in 1992 it became 260 ha and in 1993 expanding up to 410 ha it was declared industrial estates.

Size : 410 ha

Highway connection : İzmir- Ankara higway passes through the middle of the estate.

The distance to the harbour:26 km

The distance to the airport **:** 50 km

Classification of the soil : 1., 2. and 3. class agriculture land

The slope of the land : 1 %

The state of proprietorship : The whole land belons to individuals.The plots are not possession of KOSBİ .Regarding land allotment, the directorate just doing counseling.

Present land using : There are olive groves, vineyards and orchards, agriculture fields and some industrial establishments on the stage of both construction and activity.

Providing energy: There is an energy transport line on the estate.

Providing water: At the moment industrial establishments are using the water from the pits.But some of the pits using for the agriculture lands dried, because of excessive usage of underground water.And since this caused an extreme saltiness in the soil, the estate is planning to build Yiğitler dam of which project was done by DSİ.

Effects to the environment: Despite the fact that most of establishments have treatment plants, they are not used sufficiently.For this reason, the waste is being transfered to Nif Stream.It has been determined that this stream through Gediz River reaches to İzmir Gulf. Because of cyanide and similar toxic chemical substances that are let go to Nif Stream, agriculture lands around the stream got damaged.

Status of land of industrial estate: A part of the estate is in the boundaries of municipality of Kemalpaşa and another part is in in the boundaries of municipality of Ulucak

Loan collecting in the investment programs : The ministry of industry and commerce decided to give 95 % of expenditure of construction of the treatment plants and appropriate funds for them.

Founder partners:	Participating shares
EBSO	75 %
Province private managment	25 %

The estate got its legal status on August 1st, 2000.Before it got legal status previous partners were ;

Founder partners:	Participating shares
EBSO	25 %
Province private managment	25 %
The municipality of Kemalpaşa	25 %
The municipality of Ulucak	25 %

After industrial estate law was published, the authority of implementation was taken from municipalities and given to directorates of industrial estates. Accordingly, KOSBİ the municipalities of Kemalpaşa and Ulucak were put out from the administration.There are 150 avtive industrial establishments in the estate.These establishments cover 280 ha. The sectors having the most land are food industry with 63 ha (23 %) , machine and automotive industry with 56 ha (20 %). Regarding sectors firms number and size of the active industrial establishments in the estate are being indicated on the table below;

Table 5.12. Sectoral Distribution of Kemalpaşa Industrial Estate

Sector	**Size (m2)**	**Rate (%)**	**Number of the firms**
Textile and leather	130.646	9	10
Food	632.347	23	17
Plastic and chemistry	459.645	16	24
Paper and wood	250.272	9	10
Construction and mine	560.993	20	34

electric and electronic	79.198	3	5
Other	313.337	11	30
Total	2.798.456	100	150

Source: www.ebso.org.tr

Completed works: a- feasibility analysis
b- expropriation the place of the transformer
c- hali hazır maps and revision
d- the building of Turkish telecom central
e-prior project of treatment plant
f-engineering and consultancyservices of transformation project of natural gas for exist and widening areas

Continuing works: a- widening boundary
b-implementation plan of industrial estate
c-project studies of Yiğitler dam
d- buying the land for the administrative works
e- natural gas selling contract with Botaş A.Ş.
f- procuremant work for preparing natural gas deliviring line

Works that are palnning to be done: a- construction of administrative building
b- infrastructure project and its construction
c- geological and geophysics analysis
d-the certain project of Yiğitler dam and feasibility analysis of producing
e- construction of treatment plant

The problems of the estate:

1-In the ,estate announced industrial estate by the ministry, despite the industrial estate law some members do not pay infrastructure participating shares, for reasons they are not members of industry or they do not want to be so.

2-There is no storing area for garbage and solid waste.The wastes and garbages in the estate are thrown to the side of Nif stream left around casually.

3-because of high cost on operating treatment plants, industry establishments in the estate do not use the plants as it is required.So this cause pollution in Nif stream. From the samples that were taken from the stream, beyond organic pollution, fenol and cyanide pollution resulting from the industries appeared.
4-It is very risky to use İzmir-Ankara highway as service road. And also since kemalpaşa industria estate formed by itself without any plans,there is no systematic road system.
5-There are not any attempt to protect the olive groves, the vineyards and orchards and the fields. (The Report of Location Selection Committee of Kemalpaşa Industrial Estate, 1991)

Conclusion : In order to take industry establishments growing fast under control , the land that is greatly productive was decided to be used for industrial estates casually.However, it has been ten years since the estate was established, the implementation plan has not finished and put into practice. And the administration of industrial estate has not any precautions tp protect agriculture lands.Morever, since it has not been found funs for central treatment plant, the administration has not started construction . Amazingly, from 2 trillion –budget in 2002, 1 trillion and 200 billion - out of 1 trillion 697 billion TL which for investments – used for natural gas construction line.

Up to now, the directorate of the industrial estate has been working as a legalization office to legalize illegality- although it has not been done any infrastructure construction in the exist 410 ha land of industrial estates, in order to extend the land of the estate to 1210 ha works started.

Kınık Industrial Estate

Establishment : January 24th, 1997

The aim of establishing : to revitalize the economy of Kınık –the most remaning behind district in İzmir by İzmir governership (Kutlu Aktaş) and prevent industrialization on agriculture lands .At the beginning it started as planned industry estate,later on it became an industrial zone.

Size : 81 ha

Highway connection : It is on Kınık-Soma highway

The slope of the land : It is a flat land

The state of proprietorship: The whole land belongs to national treasury. But now

The distance to the harbour : 53 km (Dikili harbour)

The distance to the railway : 20 km (Soma railway)

The distance to the airport : 143 km to Adnan Menderes,77 km to Balıkesir airport

Present land using:The land is being used as pasture.Besides, there are three factories manufacturing.The land is surrounded by productive fields.

Providing energy: The energy transfer line was drawn to the area and even to the plots by province private managment and even to the plots.

Providing water: Each establishment obtaines water by drilling

Status of land of industrial estate : It is in bounders of mücavir alan of municipality of Kınık

The amount of loan used:The whole cost of infrastructure projects and construction was covered by province private managment and villiage service.

Founder partners:	Participating shares
EBSO	40 %
Province private managment	30 %
Municipality of Kınık	30 %

The distribution of land using according to mevzi implementation plan done by the municipality of Kınık:

Table 5.13. The Distribution of Land Using

Usage type	**Size (ha)**	**Rate (%)**
İndustry plots	48	59
Administrative and technic service area and gas station	5.6	7
Roads	5.3	19

Parking lot	0.8	1
Green areas	6.5	8
Treatment plant	0.8	1
Watering canal	0.8	1
Tampon green areas	3.2	4

Source: Implementation Plan of Kınık Industrial Estate

As it can be seen on the table 48 ha is reserved for industry plots which is 59 % of the whole land.

Number of members:The industrial estates has 16 members in total. According to mevzi implementation plan done by the municipality of Kınık,there are 41 industry plots in the zone. 40 of these plots were sold. Many members bought more than one plot.According to sold plots sectorel distribution is being indicated below on table 5.14

Table 5.14.Sectorel Distribution of Plots Provided for Members of Kınık Industrial Estate

Sector	**Size (m2)**	**Number of plots**
Manufacturing of food products and beverage	9461	2
Manufacturing of textile products	317185	28
Manufacturing of construction and structure equipment	84627	6
Dumper industry	7683	1
Manufacturing plastic and rubber products	6639	1
Packing industry	19050	1
Enjection industry	5637	1
Vacant plots	27767	1
Total	478049	41

Source: Municipality of Kınık

In the estate one flour,one dumper and one kanalet factories are manufacturing.

Completed works : All the infrastructure works of the estates were completed.

Problems of the estate :

1-Since the principles indicated in the master plan of the estate has not been taken into consideration, the buildings cause problems.
2-the implementation plan of the municipality and location selection committee are having conflict.
3-Even though the whole infrastructure works of the estate completed, claiming that the infrastructure works of the estate has not completed, they will not start their investments so the estate can not start manufacturing.
4- Because there is not an administartion that makes the estate start its activities, the estate has been unowned. (Municipality of Kınık)

Conclusion : Since the district does not have sufficient industry potential and it is not attractive to the investors having plots in the estate, investors are unwilling to invest

Aliağa Industrial Estate

Establishment : January 24th, 1997

The aim of establishing: In order to provide needed lands, avaliable infrastructure and environmental facilities for developing small and medium scale industries in İzmir and its district,Aliağa and also provide job opportunities and guide urban development with protecting environment.

Size : The size of industrial estate was 775 ha when location selection was done on May 28th,1997 but adding 147 ha later on October 2000 it became 922 ha in total.

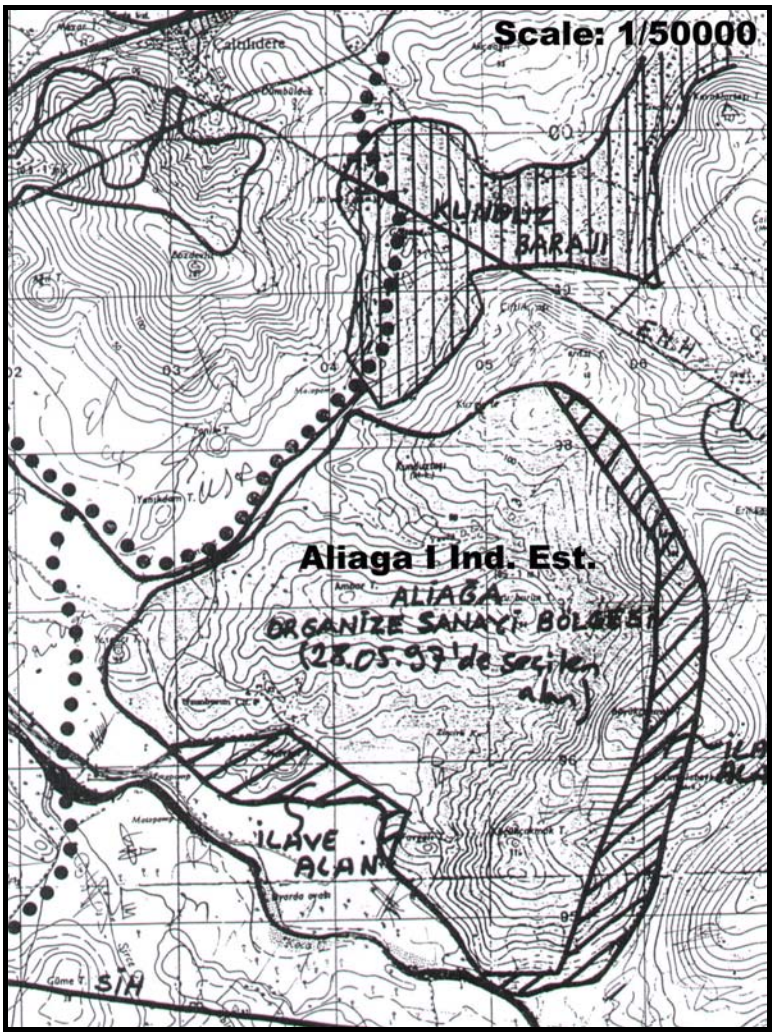
Highway connection : It is 7 km from Aliağa-Bergama highway.

The distance to the harbour: It is about 10 km to Nemrut and Aliağa harbours.

Classification of the soil:1st, 2nd, 3rd, 4th, 5th, 6th and 7th class

The slope of the land: 3-20 %

Figure 5.10.The Location of Aliaga I Industrial Estate Choosen by Location Selection Committee.



Source: The Report of Location Selection Committee of Aliaga I Industrial Estate

The state of proprietorship: 49 % of the property belongs to national treasure ,51 % is private property. 49 % of the land belonging to the national treasure was bought, 45 % the land belonging to private property was expropriated and the rest 6 % was bought willingly.

Present land using: Some part of the land is used for dry agriculture.And also there are a sheep-fold and a farm on the land.

Discharging: wasted water could be transfered to Kunduz Stream after ıı has been purified.

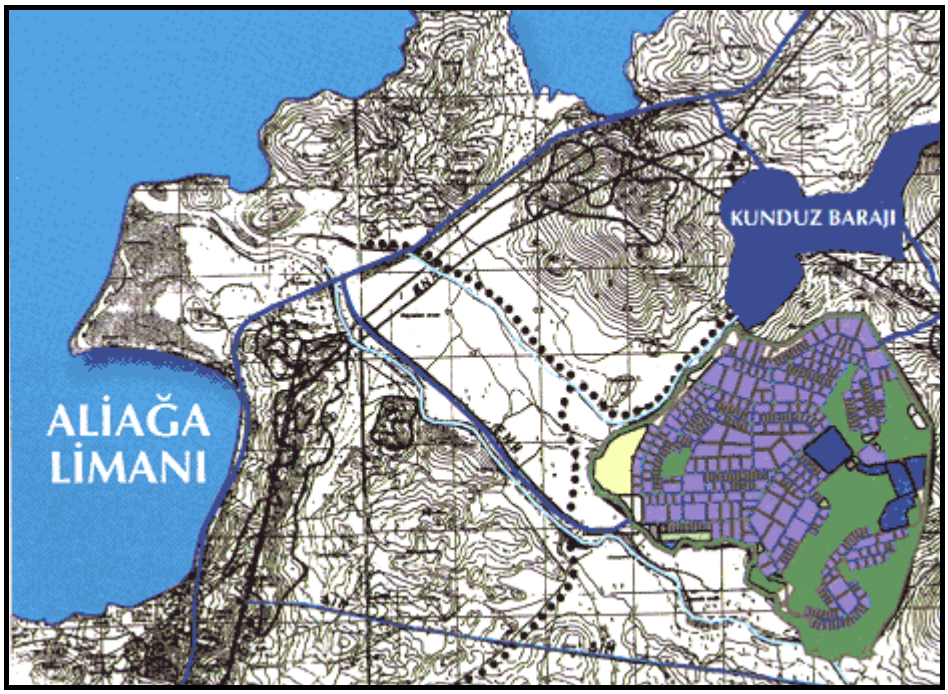
Providing energy: there is a transfer line passes 2 km from the estate.

Providing water: As a result of hidrogeologic analysis it was not found sufficient drinking water neither undergroung and on the ground.In order to cover the water need of the estate permission was got from the state water works (DSİ) to build Kunduz dam of which project was done by DSİ border touching to the estate .

Effects to the environment: regarding dominated wind it does not effect the settlements.However, in the report of the municipality of Aliağa location selection committee ,since wasted water is poured out in Güzelhisar stream,it will effect Aliağa gulf and the beach are negatively.

Status of land of industrial estate:It is out of boundary of the municipality and mücavir area.

Figure 5.11.Aliaga I Industrial Estate



Source: www.alosbi.org.tr

Financing: The whole investment cost will be provided from the membership fees.

Founder partners:	Participating shares
EBSO	70 %
Province private managment	15 %
Aliağa chamber of commerce	15 %

50.56 % of the industrial estate is for industry plots.

Table 5.15. Land Using According to Implementation Plan

Usage	**Size (m2)**	**Rate (%)**
Industry plots	4.648.319	50.56
Administrative and social centre	161.527	1.76
Education buildings area	92.130	1.00
Fair-exhibition-techopark area	75.593	0.82
Social activity area	105.062	1.14
Entrence	4460	0.05
Customs area	14663	0.16
Treatment plant area	265109	2.88
Liquid fuel station area	8183	0.09
Technic sevice area	97.019	1.06
Transformer	23.005	0.25
Natural gas	10.106	0.11
Helicopter runway	8211	0.09
Parks	259.546	2.82
Sports areas	132.072	1.44
Afforested areas	1.904.715	20.72
Health protection band	664.472	7.23
Road+parking lots	720.219	7.83
Total	9.994.411	100

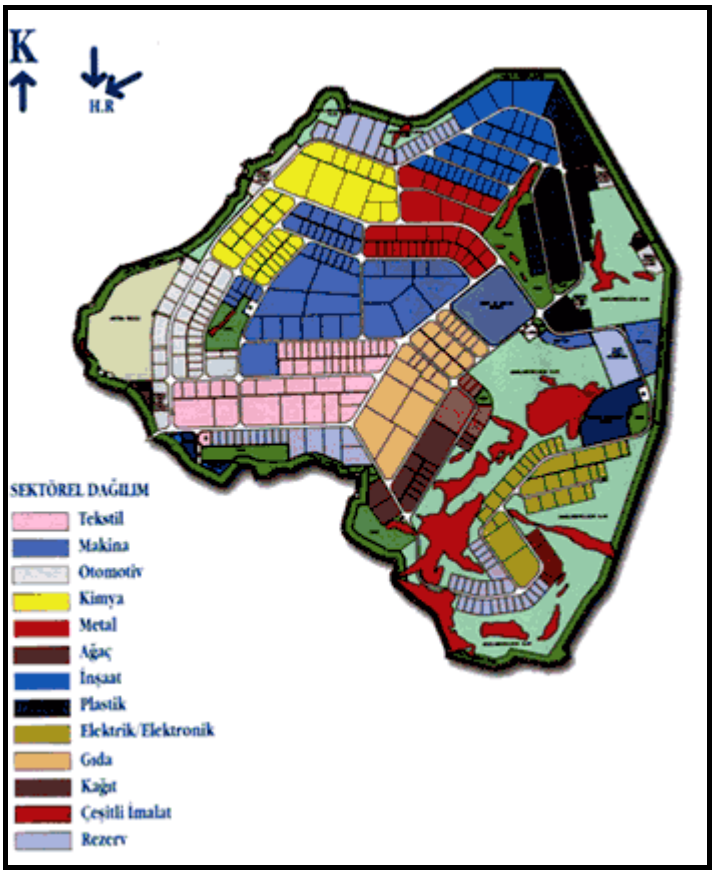
Source: www.alosbi.org.tr

Table 5.16.Type, Number and Size of Industrial Plots

Type of plot	M2	Number	Rate
A	5.000-7.000	202	51.27
B	7.001-10.000	107	27.16
C	10.001-20.000	47	11.93
D	20.001-30.000	11	2.79
E	30.001-40.000	2	0.51
F	40.001-50.000	25	6.35
Total		394	100

Source: www.alosbi.org.tr

Figure 5.12.The master plan of aliaga I Industrial Estate



Source: www.alosbi.org.tr

In the industrial estate 80.6 ha (17.14 %) was used for machine equipment manufacturing , 61.4 (13.04 %) for chemical substance and products manufacturing 56.7 (12.05 %) for manufacturing textile products sectors .

The total number of plots in the estate are 397. 279 of them (388 ha) were allotmented. 47 (76.7 ha) of allotmented industry plots were for machine and equipment manufacturing, 37 (38.7 ha) were for construction and structure equipments and 30 (47.5 ha) were for textile products manufacturing sectors.

Table 5.16.is indicating size of lands that will be present in the estate and sectors of which allotment was done:

Figure 5.13.The views of Aliaga I Ind. Est. Figure 5.14.The views of Aliaga I Ind. Est


Source: www.alosbi.org.tr

Completed works: a- approval of location selection and boundaries

b- expropriation

c-feasibility analysis

d-hidrogeologic analysis

e-protocol of Kunduz dam

f- doing of hali hazır maps

g- implementation plan and infrastructure projects

h-project of infrastructure practicing works

i-establishment of work site buildings

j-higway connection works

k-procurement of construction of infrastructure

Continuing works : a- fire band and health band works

b-obtaining water for work site

c- construction of infrastructure works

Works planned to be done :

a- projects and construction of administrative and social buildings

b- project and construction of technopark

c- project and construction of fair and work centre

d- construction of education building

e- energy powerhouse and transfer line

f-natural gas building

g-procurement of project of central treatment plant

h- central construction of treatment plant

i- procurement of Kunduz dam

j- construction of collected residence

In 2003, first stage of the estates which covers 62 % of the area started.Construction of infrastructure is planned to be completed in 2005 and it was decided to start second stage which covers 38 % of the area in 2005. (Feasibility Study for Aliağa Organized Industrial Estate, 1999)

Conclusion : Aliağa has been a valuable attractive centre for industrialists due to its strong highway and two harbours in the district, the public investments such as Petkim and Tüpraş providing raw material to industry establishments.The estates which was established 7 km from the centre of Aliağa had great demands.70 % of the whole plots were allotmented. Infrastructure construction of the first stage of the estate started and planned to be completed in 2005.All the investment expenditures of the estate are being covered by the membership fees. Construction of infrastructure in the estate seems to be completed and activated soon.

5.4.3 Industrial Estates on Stage of Site Analysis and Project

Torbalı II Industrial Estate

Establishment : January 14th,2000

The aim of establishing: The works in order to establish industrial estate in Torbalı started with the pioneering of EBSO, and in the first place determined for the estate in Kabarcık locality (Torbalı I industrial estate land) , 410 industrialists required plots.Since Torbalı I industrial estate did not cover the need and also the location problems of industrial estate delayed the establishing annocument of the estates. In 1999 EBSO determined a place in Torbalı for second industrial estate.

Size: 128 ha

Highway connection : Aydın-İzmir highway passes 5km away from the North-East of the estate.And the North-East boundary is border to to Aydın highway.

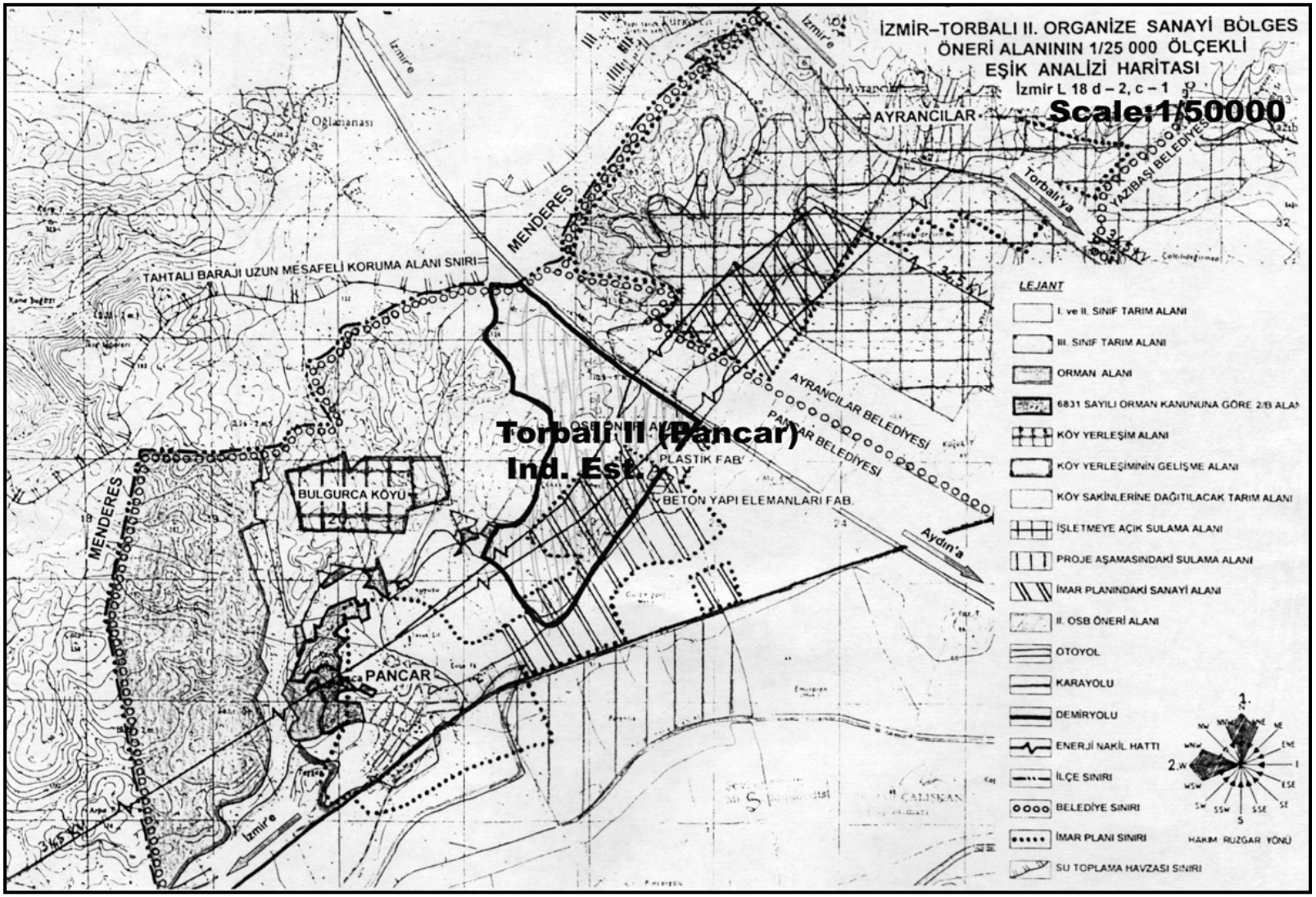
The distance to the harbour: 35 km

The distance to the airport**:** 21 km

Classification of the soil : 1st, 2nd , 3th and 4th class agriculture land.

The slope of the land : between 3 – 12 %

Figure 5.15.The location of Torbali II (Pancar) Industrial Estate choosen by location selection committee



Source: The report of location selection committee of Torbali II (Pancar) Industrial Estate

The state of proprietorship : 70 ha belong to national treasure and 58 ha to private possesion.

Present land using : Dry agriculture is being done on some of the land.

Discharging :treatmented wasted water and rain water is discharged to Çevlik stream through collectors.

Providing energy: 6 km from the North-East of the land 154kw-energy transfer line passes.

Providing water: The need for water will be covered from the pits be opened.

Effects to the environment: Dominated wind does not effect the settlements.

Status of land of industrial estate: The whole land is in the boundary of the municipality of Pancar .

Loan collecting in the investment programs : All investment costs will be covered by the industrial estate.

Founder partners:	Participating shares
EBSO	70 %
Province private managment	14 %
Torbalı chamber of commerce	8 %
The municipality of Pancar	8 %

The number of members : 75

Completed works: a- location selection

b- observational geologic analyse

Continuing works : expropriation

Works that will be done : It has been aimed to start infrastructure works in August, 2003 and complete the whole work in 2007. (The Report of Location Selection Committee of Torbalı II (Pancar) Industrial Estate, 1999)

The municipality of Pancar changing the positive sight of view in the report of location selection committee in 1999 later, it brought a suit against the Ministry of Commerce and Industry.

Bergama Industrial Estate

Establishment : January 24th, 1997

The aim of establishing: As a result of unsufficient agriculture lands, The Bergama Chamber of Commerce attempted to establish an industrial estate in order to create new employment facilities and revive the economy.

Size: Announced land size in offical gazette was 165 ha,whereas as a result of discussions done with the Ministry it was approved as 1.747.491 m2

Highway connection: 600 m far from İzmir-Çanakkale Highway

The distance to the harbour : 14km

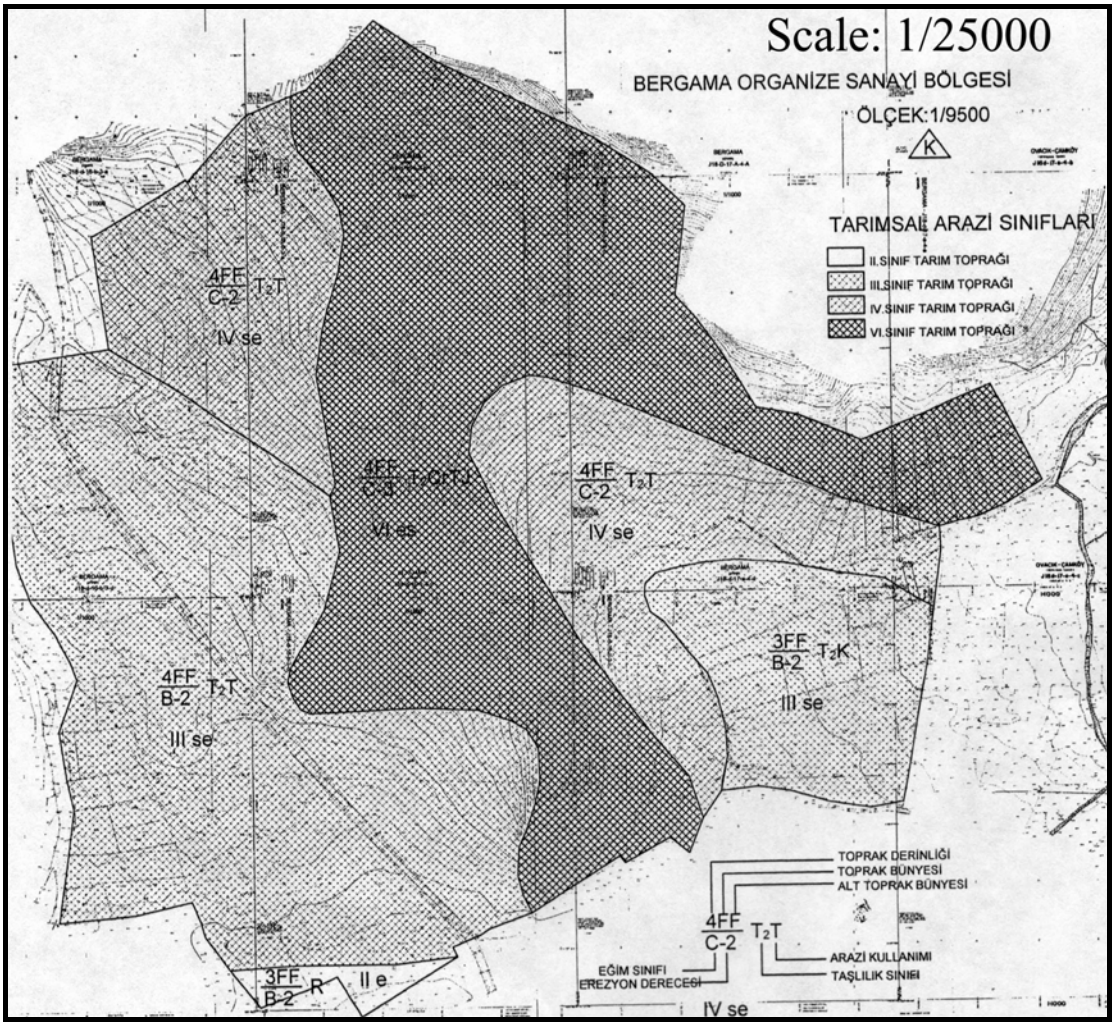
The distance to the airport: 100km

The distance to the railway: 40km

Classification of the soil : 5 % 2nd , 40 % 3rd, 26 % 4th, 29 % 6th class

The slope of the land : 64 % of the land has 0-5 % slope, 16 % has 10-15 % slope, 12 % has 10-15 % slope, 8 % has 15-20 % slope.

Figure 5.16.The Location of Bergama Industrial Estate Choosen by Location Selection Committee



Source: The Report of Implementation Plan of Bergama Industrial Estate, 2003

The state of proprietorship : 62 % of the land belongs to national treasury (pature land) and 38 % of it belongs to private property

Present land using: some part of the land is agriculture land.Bayat plain of which analysis done on master plan level by DSİ remains as watering land.Approximately, industrial estates covers 40 % of the land.And also there is a forest depot on the land.

Discharging: It can be poured out to Köy Stream.

Providing energy: Energy transfer line pass through the estate.

Providing water: It was found a deep water pit that gives 30 lt per second in the industrial estate land. But the characteristic of the water are not suitable for drinking and using for industry. Suitable underwater was found 700 m from the estate.

Effects to the environment : regarding dominated wind settlements are not effected negatively.Yet, since the land is surrounded by quality agriculture land and forest land,it is inevitable for them to get effected.

Status of land of industrial estate : It is out of borders of mücavir and municipality lands.

Loan collecting in the investment programs : In 2001: 400.000.000 TL
In 2002: 800.000.000TL
Total : 1.200.000.000 TL
(www.brto.org.tr)

The amount of loan used : It has been obtained 252 billion loan from the Ministry of Industry and Commerce for expropriation (www.Berto.org.tr)

Founder partners:	Participating shares
EBSO	70 %
Province private managment	15 %
Bergama the chamber of commerce	15 %

Number of members : Bergama industrial estate has 36 members in total. Just before the crisis in 2000 it had 55 members.The distribution of members according to sectors is being indicated in table 5.18 for the moment there are not any industry establishments in the estate.

Table 5.17. The Distribution of Bergama Industrial Estate Members According to Sectors

Sector	**Number of members**
Manufacturing of textile products	9
Cotton gin	8
Manufacturing of machine and equipment	5
Manufacturing of electrical machine and equipment	2
Manufacturing wood and fungus products	3
Manufacture of tobacco products	3
Manufacture of food products and beverage	2
Manufacturing of plastic and rubber products	2
Mining	2
Total	36

Source: www.berto.org.tr

Since the implementation plan of the estate has not been approved, number of plots and land using are not certain yet.The implementation plan has been sent to the aproval of the ministry of industry and commerce.

Figure 5.17.The Views of Bergama Industrial Estate

Source: www.berto.org.tr

Completed works : a- feasibility analysis
b- expropriation
c-hali hazır map
d- procurement of infrastructure project
e-works of stream improvement project

Continuing works : a- drilling Works in order to provide the water need of the estate
b- Project works in order to have energy transfer line passing through the estate into healt protection band
c- doing mevzi implementation plan

Works that were planned to be done :a- taking the energy transfer line into gren area
b- completing infrastructure projects of the estate

Problems : The ministry of industry and commerce is appropriating less funds than required

b-The works are going too slow due to the bureaucracy (The Report of Location Selection Committee of Bergama Industrial Estate, 1996)

Conclusion : There are Kınık industrial estate of which almost all infrastructure works completed , waiting for industrialists and 30 km to Bergama industrial estate and Aliağa industrial estate that has 60 % of filling rate, is 40 km to Bergama industrial estate planned to be completed in 2005, of which infrastructure works started. Thus, it will not be economic for all Bergama,Kınık, and Aliağa industrial estates , if Bergama industrial estate start infrastructure Works before other industrial estate has not reached certain filling rate.

Due to the attractive feature of industry, the surroundings of industrial estate is being constructed by residence, commerce and small industry lands.Since industrial estate is surrounded by quality agriculture land and forest land, after industrial estate starts to be runned these kinds of constructions should be avoided by taking measures.

.**Ödemiş Industrial Estate**

Establishment : January 13th,1994

The aim of establishing: To create new employment facilities in Ödemiş and surroundings and bring a solution to unemployment.In addition to carrying industry establishments with this practicing which is renewing technology,incresing capacity and developing firms it was aimed to increase manufacturing and quality (Ödemiş Industrial Estate Feasibility Report)

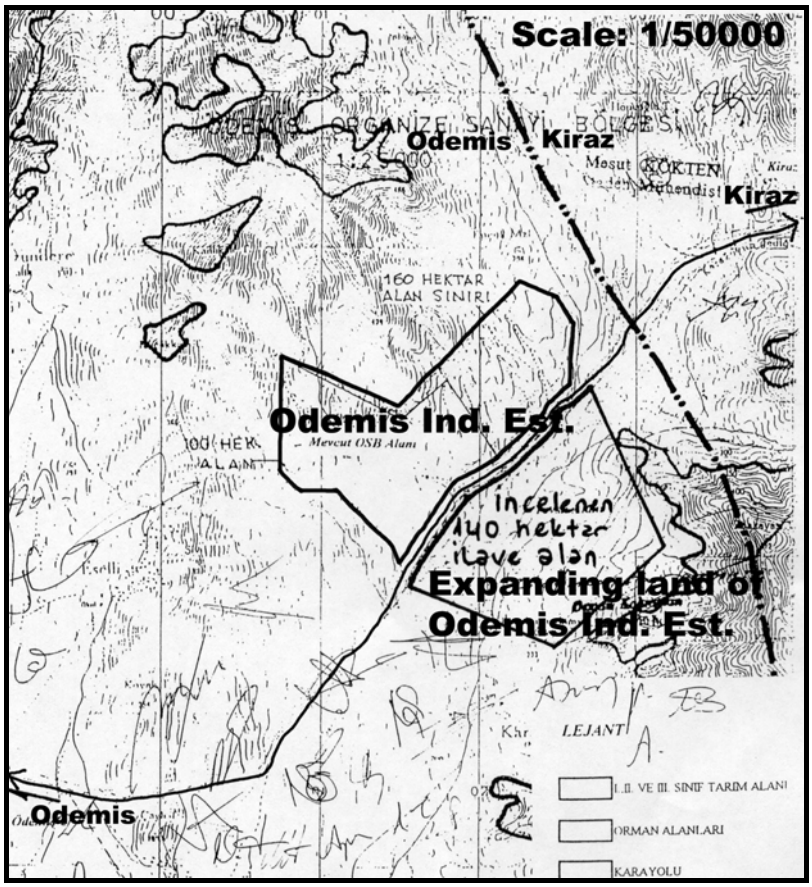
Size: At first the size of the industrial estate was 160 ha, later with possible demand of foreign investors it was increase to 300 ha.Because there has not been enough demand for the estate,the area was decided to enlarge step by step.The first step was planned to be 100 ha but in the second step it is planned to be 300 ha.The works on the first step are continuing.

Highway connection : Is sided to Ödemiş-Kiraz highway

Classification of the soil: Third and seventh class agriculture land

The slope of the land :It differs between 1-20 %

Figure 5.18.The Location of Ödemiş Industrial Estate Choosen by Location Selection Committee.



Source: The Report of Location Selection Committee of Ödemiş Industrial Estate, 1994

The state of proprietorship :74 % of the state belongs to individuals

Discharging :After purificating it can be poured out to Gavur Stream

Providing energy: It has been stated in the feasibility report of Ödemiş industrial estate,energy could be provided from Kaymakçı transformer centre which is 3km from the estate.But as aresult of correspondences between the region directorate of industrial estate and Electricity Institution of Turkey (TEK), it was inform that Kaymakçı transformer centre would not cover the need of the estate and the need of energy could be covered from Ödemiş transformer centre which is 20 km away.And the investment was informed to be 1 trillion TL.

Providing water: there is water difficulty in the estate.But it could be provided from Dutdibi which is 5km away by driling.

Effects to the environment: Due to dominated wind, Çaylı settlement area can be effected negatively.

Status of land of industrial estate: It was established outside of borders of mücavir and municipality lands. Since it is easier to get construction licence from municipalities than getting from the ministry of prosperity, enterprising organization ask Kaymakçı municipality to take the estate into its borders by applying to the ministry of prosperity and in 1999 it was taken into borders of Kaymakçı municipality.

Loan collecting in the investment programs :

1997- 6.300.000.000 TL

1998- 30.000.000.000 TL

2000- 250.000.000.000 TL

2001- 300.000.000.000 TL

2002- 750.000.000.000 TL

total : 1.336.300.000.000 TL

The amount of loan used:

1996- 5.330.000.000

1997-5.000.000.000

1998-754.227.500

2000-1.035.915.075

2001-13.616.000.000

total-25.736.142.575 TL

Founder partners:	Participating shares
EBSO	25 %
Province private managment	25 %
Ödemiş chamber of the commerce	25 %
Municipality of Kaymakçı	25 %

The distribution of land usind according to implementation plan

Type of usage	size (ha)	rate (%)
Industry plots	56.40	56.40
Social ang managment services	0.83	0.83
Technic service land	0.42	0.42
Commerce land	0.56	0.56
Green areas	29.91	29.91
Canal	2.50	2.50
Roads	8.38	8.38
Total	100.00	100.00

As the table indicates above, the land planned for industry plots is 56.40 ha which is 56.40 % of total land.Since the slope of the land is too much and Karanlık stream divides the land into two parts,the land for industry plot is less than 70 % of gross land.

Looking at sectorel distrubiton of plots alloted; manufacturing of food products and beverage has 48 % and weaving and clothing industry has 13 % rate.The sectors apart fro these two has very little rates.Table 5.20 is indicating sectorel distribution of alloted plots.

Table 5.18. Sectoral Distribution of Alloted Plots

Sector	**Size (m2)**	**Rate (%)**
Food industry	110.000	48.34
Weaving and clothing industry	30.000	13.19
Paper industry	10.000	4.40
Printing industry	10.000	4.40
Plastic industry	5.000	2.20
Iron and steal industry	10.000	4.40
Metal industry except iron	5.000	2.20
Machine industry without electricity	12.5000	5.48
Agriculture equipment and machines industry	10.000	4.40
Electrical machine industry	15.000	6.59
Other	10.000	4.40
Total	227.5000	100.00

Source: Feasibelity Study of Ödemiş Industrial Estate, 1996

Completed works : a-location selection
b-expropriation
c- feasibility analysis
d- geologic and geophysics analysis
e-halihazır map
f-implementation plan
g-planting sapling on green area

Continuing works : a-parcellation
b-report of ground searching
c-preparations of prior infrastructure project

Works that will be done : a-completing of prior infrastructure project
b- all infrastructure projects
c-procurement of infrastructure project

According to feasibility report of Ödemiş industry estate, the cost of investment project is 10.100.000$. 40 % of this is being planned to be covered by Social Development Fund Loan Europe Council, 54 % by the loan of the ministry of industry and commerce and 6 % with aid of enterprising organization.

The problems of the estate :

1-Considering indefiniteness of economic future of the country , some members who were planning to make investments immediatly before the economic crises , postponed them and small number of them giving up making investment ,asked to cease from membership.

2-In the industrial estate ,there are some difficulties of registering new members.Just 44 % of the whole land were alloted.

3-There are some difficulties on obtaning revenues of monthly participating share of infrastructure.

4- With the objections of owners of properties, costs of expropriation were increased 7-8 times by the court so industrial estates have difficulties of paying the costs with their own present sources.

5-Natural gas lines including lines of Botaş general directorate which are on stage of planning were not planed for Ödemiş distrinct.

6- Energy transfer line costing 1 trillion TL is forcing the budget of the estate.

7-The highway giving service to the zone of the estate does not have qualities to encourage industrialist planning to make investment. (The Report of Location Selection Committee of Ödemiş Industrial Estate, 1994& Feasibelity Study of Ödemiş Industrial Estate, 1996)

Conclusion : With developments will occur in the estate, increasing interest has been aimed.Moreover, arranging a meeting with the members,executive committe permitted

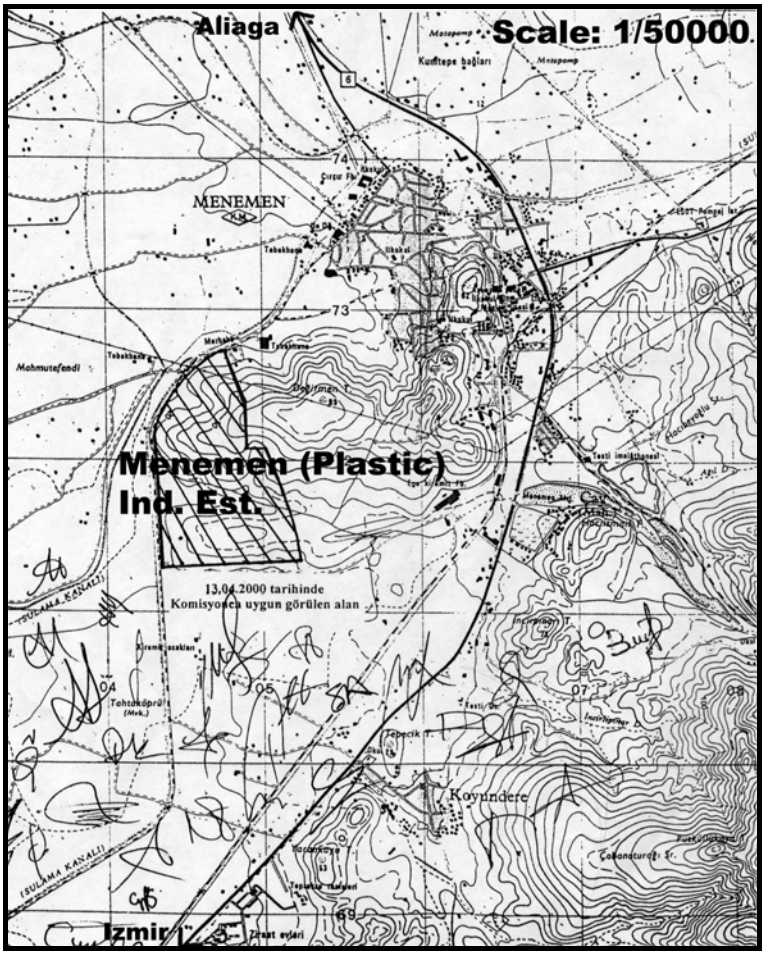
industrialist who wanted to establish his establishments before infrastructure works have not completed so the attraction of the estate was aimed to be increased.

Since ödemiş industrial estate is not found attractive by industrialists, the directorate of the estate has difficulties of gathering members.infrastructure participating shares collected from the present members are so unsufficient that they would not cover the constructure financing.Therefore Ödemiş industrial estate does not seem to be completed in short and medium fixed term.

Menemen (plastic) Industrial Estate:

Established in 1999 and its location selection done as 92ha, location selection of the industrial estate was approved in January 2003.The estate of which location selection done up to now, project and expropriation works have not started.

Figure 5.19.The Location of Menemen Industrial Estate Choosen by The Location Selection Committee.



Source: The Report of Location Selection Committee of Menemen Industrial Estate, 2000

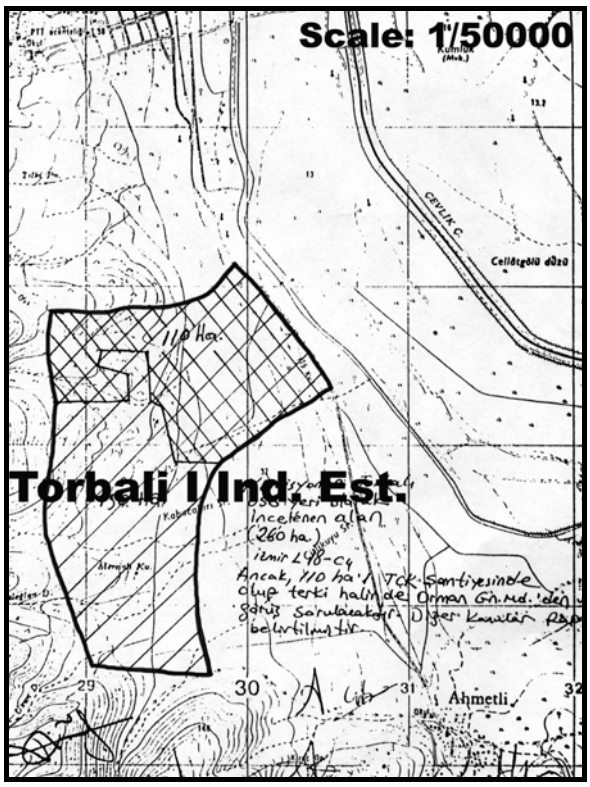
Torbalı I Industrial Estate:

The location selection of the industrial estate which was planned to be 260ha and established in 1996 was done.However , the location was not approved,since some representatives of establishments that participated in the location selection committee did not notify positive sight.

The estate is 3rd,4th and 7th class agriculture land.There are some olive and fruit trees as well as agriculture lands that can be watered by underground water.

Furthermore,on the zone of the industrial estate 110 ha of the land is being used for work site of the stone mine which was hired from the directorate of region highways in 1996 by forest general directorate,is used for construction of İzmir-Aydın motorway.As a result of discussions done in 2001,the stone mine was hired for another three years by the directorate of region highways in order to to cover the need for the motorway.

Figure 5.20.The Location of Torbalı I Industrial Estate Choosen by Location Selection Committee.



Source: The Report of Location Selection Committee of Torbalı I Industrial Estate, 1996

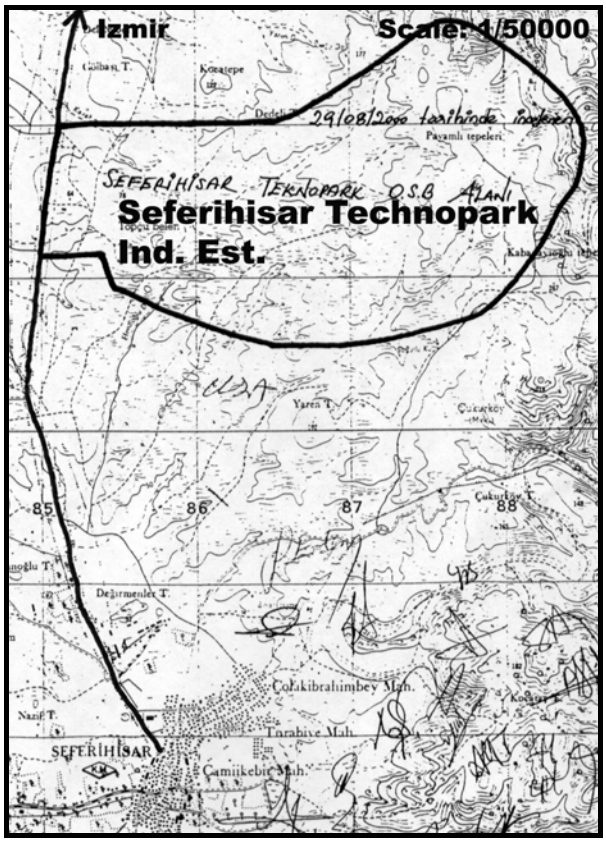
Aliağa Chemistry (Petkim) Industrial Estate:

Location selection works of the estate are going on but the land belonging to Petkim which is 78.7 ha was examined and not found suitable.

Seferihisar Technopark Industrial Estate :

The location selection of the estate which is planned to be 500 ha was done but it was not approved.

Figure 5.21.The Location of Seferihisar Technopark Industrial Estate Choosen by The Location Selection Committee



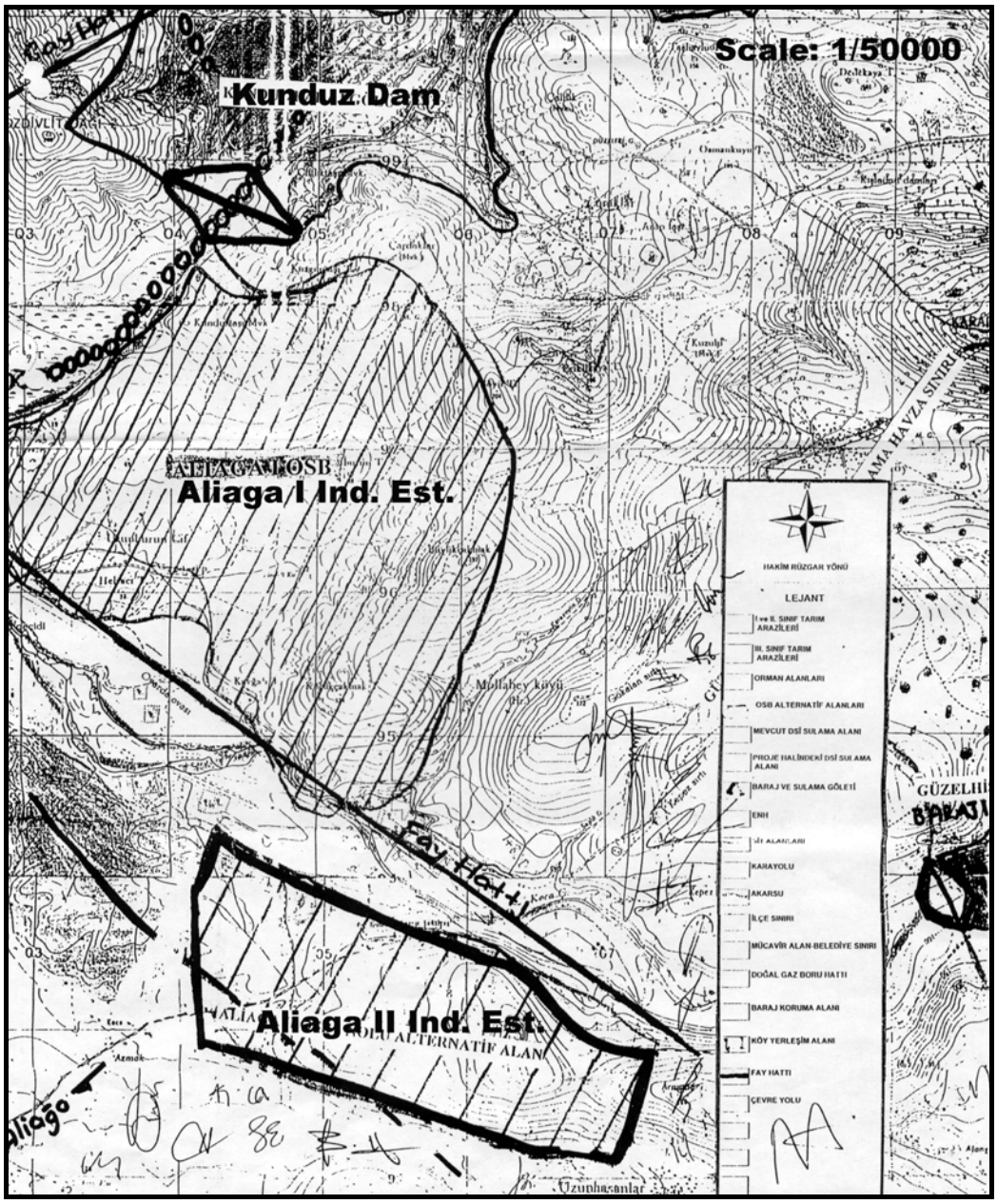
Source: The Report of Location Selection Committee of Seferihisar Technopark Industrial Estate, 2000

Aliağa II Industrial Estate :

For the industry estate planned as 400 ha ,a place 500m far from Aliağa industrial estate was determined.Although some representatives of establishments that participated in the location selection committee did not notify positive sight,location selection was done but it was not confirmed yet.Since 270 ha of the zone is pasture, the representative

of directorate of agriculture province ;since on the zone there are 11 pits for drinking,using and watering water of which nourishing field will be effected from industrial estate established negatively and because direction of the dominated wind is North, olive grove fields will have harm,representatives of directorate of health province as well as representatives of municipality of Aliağa and the ministry of environment informed a negative sight.

Figure 5.22.The Location of Aliaga II Industrial Estate Choosen by Location Selection Committee.



Source: The Report of Location Selection Committee of Aliaga II Industrial Estate, 1999

Kemalpaşa I (widening) Industrial Estate

The location selection of the widening land which is planned to be 800 ha.Nevertheless, some representatives of establishments that participated in the location selection committee did not notify positive sight,the location was not approved.The factors for establishments to notify negative sight are ;

1-most of widening area is 1st,2nd,3rd class agriculture land , vineyards and orchards and olive grove.

2- In order to determine kinds of olives exist in Turkey; as a result of studies in 1967 in Marmara,Aegean, the Mediterranean,Southern-east Anatolia, the Black Sea regions, in 1986 88 kinds of olives formed 'collection of home products olive' in the zone determining morphologic features.

Between 1970 and 1972 in the same way imported KALEMs from Syria, Tunisia, France, Italy and Spain were grafted so in 1974 'collection of foreign olives' was formed with 28 kinds of olives.In these two collections there are 116 kinds of olives and in Turkey Olive Gene Bank was established.

Besides, in Kemalpaşa-Ulucak in field of searching and production 'the improvement project of gene of olive' carried out internationally, 'the project of obtaning new kinds of olive by hybridizing' carried out nationaly, there are approximately 4.000 hybrid individuals. Apart from these projects, there are 6.000 olive trees that are being used for searching and production studies of olives.

3-Due to dominated wind, The Municipality of Ulucak gets effected. (The Report of Location Selection Committee of Aegean Clothing Industrial Estate, 1999)

İzmir Industrial Estate Specialized on Floriculture

As a result of works started with pioneering of İzmir the Chamber of Commerce in 1999, the ministry of industry and commerce in 2001 included İzmir industrial estate specialized on floriculture on its investment program.

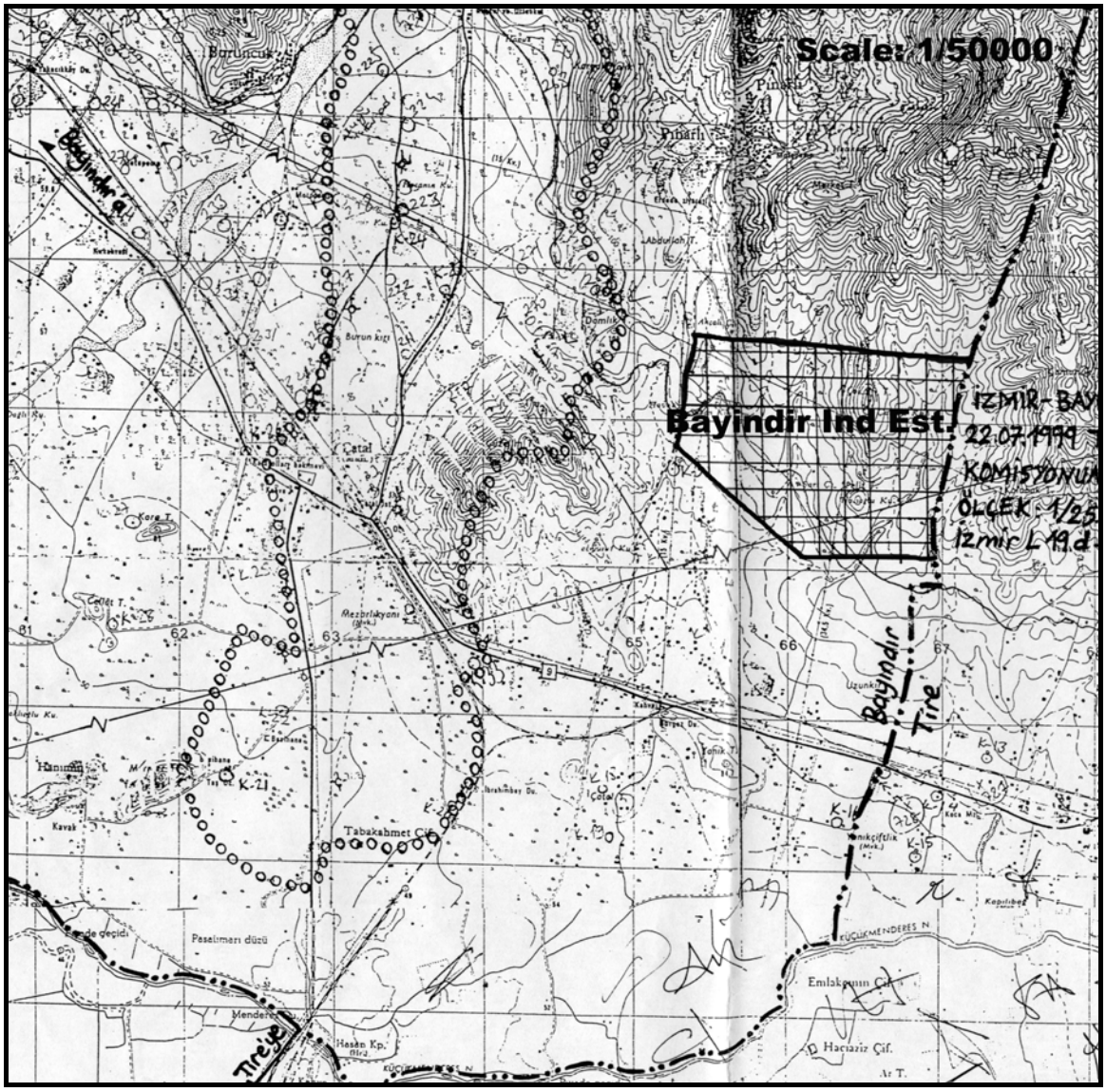
The biggest loss of floriculture sector that has market of 24,7 billion dolar in the country and abroad is deficiency of organization.So in order for activities such as grow cutting flower, pick, classify, store and market to be more organized and turn into an institution, industrial estate specialized on floriculture was aimed to be established.

The works for establishing the estate started in Bayındır district on a land of 180 ha but geotermal resources in the zone appeared to be insufficient for wetting greenhouses.So the area in Bayındır was given up.At the moment, site analysis are going on in Bergama and Dikili on a few areas.

Bayındır (Food) Industrial Estate :

The location selection of zone planned to be 215 ha was done but it has been approved yet.On the chhosed zone dry agriculture is being done.9km far from Bayındır industrial estate, there is Tire industrial estate of which infrastructure constructions are continuing.

Figure 5.23.The Location of Bayındır (Food) Industrial Estate Choosen by Location Selection Committee

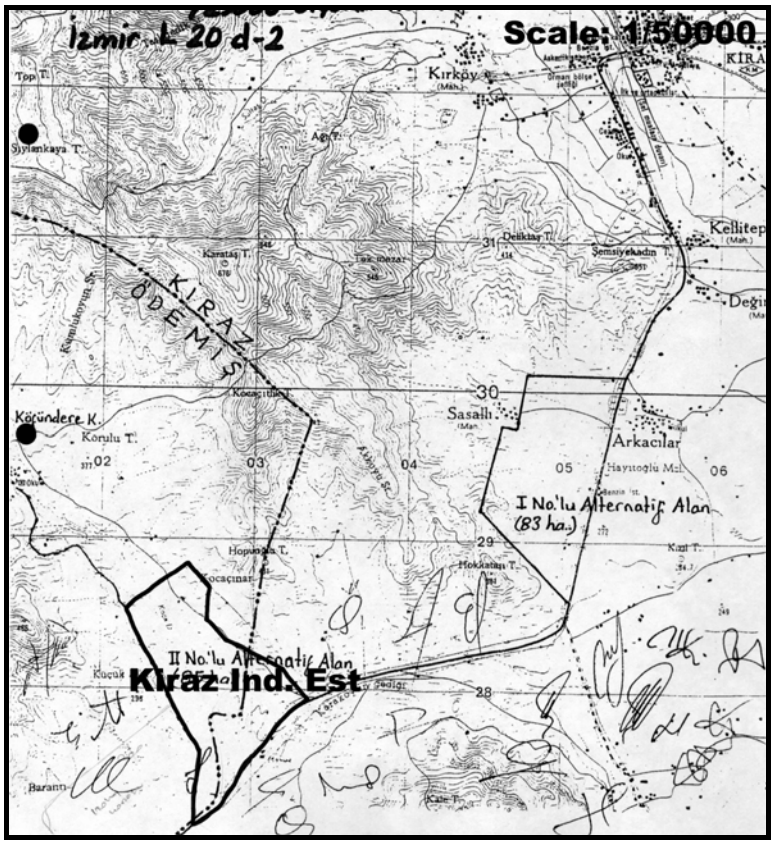


Source: The Report of Location Selection Committee of Bayındır (Food) Industrial Estate, 1999

Ki raz Industrial Estate:

The location selection of zone planned to be 85 ha was done but it has been approved yet.22.5 ha of the zone is in the borders of Kiraz distrinct and 62.5 of it is in the borders of Ödemiş distrinct.Ödemiş industrial estate of 300 ha of which location is certain is present on touching and the south border.

Figure 5.24. The Location of Kiraz Industrial Estate Choosen by Location Selection Committee.



Source: The Report of Location Selection Committee of Kiraz II Industrial Estate, 2000

İzmir Centre (Mermerciler) Industrial Estate:

It has not been found any land for the estate.Works on location selection of the estate are going on.

5.4.4.The Space Requirements of Manufacturing Industry in Industrial Estates in 2020

Assuming medium scale manufacturing industry establishments will choose industrial estates that present plots of which infrastructure completed, the need of industrial estate

land for İzmir by 2020 has been predicted.In this prediction study, one of the most important indicators of development sectors –employment was used. The studies that were done for prediciton of the need of industrial estate land could be gathered under three headlines;

1- Predicting of manufacturing industry in 2003 and 2020 year according to sectors
2- calculating land size for each employee in every sector choosing a place in industrial estate
3- calculating the rate of area for industry plots in completed industrial estaes with the rate of size of industrial estate land.

The study has been completed in four steps.First;using employment datas of manufacturing industry between 1980-1999, employment according to sectors in manufacturing industry of 2003 and 2020 predicted with Regression models (Such as Linear, Exponential, S-Curve, Cubic, İnverse etc.), Arima-Moving average and Exponential Smoothing-Holt models. And taking out 2020 employment done with projection from employment of 2003 , the increase was calculated.

Second, according to sectors of firms that are manufacturing in the present industrial estates, mean plot size for each employee was calculated.

Third, multiplying predicted employment increase with mean plot size for each employee according to sectors of firms that are manufacturing in the present industrial estates required industry plot of land in total was found.

Fourth, in order to calculate total industrial estate land from total industry plots of land, the mean of rate of industry plots in the present completed industrial estates to rate of industrial estate land was used . Calculating the mean with total size of industry plots, the need for industrial estate land in 2020 was predicted.

The details results of studies above are being indicated below;

1-prediction employee

Using datas of employees working in manufacturing industry between 1980-1990, 95 % lower confident interval of predicted mean and 95 % upper confident interval of

predicted mean and predicted value and projection of nine sectors that form manufacturing industry was calculated with Regression models (Linear, Exponential, S-Curve, Cubic, İnverse etc. whicn will be determined by Rsquared), Arima-Moving Average and Exponential Smoothing-Holt Models

In the projection predicting with confidence interval and predicted value gave flexibility to the projection.

In 1999, the sectors having most employment were food, drink and tobacco industry,metal objects-machine equipment, transportation, vehicles, scientific and professional measurement devices industry and weaving,clothing and leather industry. As a result of projection with the three models done, it has been predicted that weaving, clothing, and leather industry, metal objects-machine equipment, transportation, vehicles, cientific and professional measurement devices and chemistry-oil, coal, rubber and plastic products industry will have the most employment. In addition, in 1990 the sectors having the most employment were food ,drink and tobacco industry and with other manufacturing industry sectors having the less employment will contuniue to have decreasing trend.And present employment will decrease thruogh years was gained from the study.Projections belonging to sectors and evaluations of projections are being indicated ;

Fit denotes predicted mean
Lcl denotes 95 % lower confident interval of predicted mean
Ucl denotes 95 % upper confident interval of predicted mean

Table 5.19.Food, Drink And Tobacco Industry

Year	Number of employee	Regression Exponential			Arima Moving average			Exponential Smooting-Holt
		fit	lcl	ucl	fit	lcl	ucl	fit
1980	**32178**	**31846**	**27702**	**36608**	**31947**	**27492**	**36401**	**31916**
1981	29066	31388	27348	36024	31630	28106	35155	31420
1982	28076	30936	26993	35455	29477	26010	32944	30638
1983	31789	30491	26639	34901	29692	26423	32960	29811
1984	33295	30053	26285	34361	31757	28492	35022	29457
1985	**30199**	**29620**	**25930**	**33836**	**30950**	**27764**	**34137**	**29328**
1986	30849	29194	25577	33324	28814	25629	32000	28910
1987	28337	28775	25223	32827	30495	27343	33647	28619
1988	27917	28361	24869	32342	26881	23728	30033	28103
1989	29317	27953	24516	31871	28887	25746	32029	27595
1990	**27967**	**27551**	**24164**	**31413**	**27997**	**24851**	**31142**	**27294**
1991	26955	27155	23812	30967	27218	24069	30366	26896
1992	24982	26764	23460	30533	26612	23453	29770	26436
1993	24925	26379	23110	30111	25137	21965	28308	25811
1994	25345	26000	22761	29700	25795	22606	28983	25234
1995	**25327**	**25626**	**22413**	**29300**	**25185**	**21975**	**28395**	**24757**
1996	27785	25257	22066	28910	25210	21976	28444	24333
1997	27134	24894	21721	28530	26646	23382	29909	24230
1998	24226	24536	21378	28160	24620	21325	27914	24103
1999	**22206**	**24183**	**21037**	**27800**	**23516**	**20186**	**26847**	**23698**
2003		**22822**	**19696**	**26443**	**22106**	**17267**	**26946**	**21821**
2005		**22170**	**19043**	**25811**	**21251**	**16184**	**26318**	**20957**
2010		**20621**	**17467**	**24344**	**19112**	**13396**	**24827**	**18797**
2015		**19180**	**15984**	**23015**	**16972**	**10523**	**23422**	**16637**
2020		**17840**	**14602**	**21796**	**14833**	**7589**	**22077**	**14477**

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Dependent Mth    Rsq  d.f.        F  Sigf       b0       b1
   VAR00002 EXP  ,676    18   37,60  ,000 9,1E+16  -,0145
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Graph 5.26. Food, Drink And Tobacco Industry

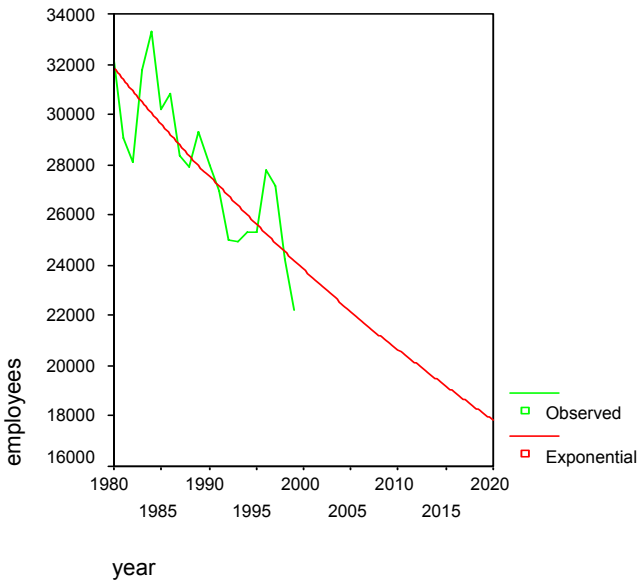

Table 5.20.Weaving,Clothing and Leather Industry

Year	Number of employees	Regression S-Curve			Arima Moving average			Exponential Smooting-Holt
		fit	lcl	ucl	fit	lcl	ucl	fit
1980	**14702**	**16361**	**11884**	**22526**	**16676**	**8782**	**24569**	**14829**
1981	15153	16878	12305	23152	16284	10075	22494	15068
1982	15627	17411	12736	23803	17098	11005	23191	15329
1983	17358	17961	13176	24482	17349	11637	23062	15614
1984	17815	18527	13626	25190	18985	13284	24685	16062
1985	**18075**	**19110**	**14085**	**25928**	**18644**	**13105**	**24184**	**16527**
1986	20249	19711	14553	26697	19679	14141	25216	16988
1987	23695	20330	15029	27501	21161	15698	26625	17653
1988	24959	20968	15514	28340	23323	17858	28787	18656
1989	25148	21626	16007	29216	23181	17745	28617	19749
1990	**25393**	**22303**	**16508**	**30131**	**24029**	**18586**	**29473**	**20805**
1991	21585	23001	17018	31088	24117	18673	29562	21825
1992	24973	23720	17534	32087	21520	16059	26981	22361
1993	26153	24460	18059	33131	26974	21492	32457	23208
1994	24737	25223	18590	34223	24064	18554	29574	24117
1995	**29013**	**26009**	**19129**	**35364**	**25859**	**20311**	**31407**	**24801**
1996	30517	26819	19675	36556	28460	22873	34048	25885
1997	28693	27653	20229	37802	28141	22501	33780	27058
1998	26218	28512	20789	39104	27488	21797	33179	27948
1999	**19509**	**29397**	**21357**	**40464**	**26575**	**20820**	**32330**	**28484**
2003		**33210**	**23700**	**46536**	**29915**	**21339**	**38491**	**30062**
2005		**35291**	**24916**	**49987**	**31066**	**22087**	**40045**	**31301**
2010		**41062**	**28099**	**60005**	**33944**	**23814**	**44074**	**34396**
2015		**47741**	**31507**	**72340**	**36822**	**25389**	**48255**	**37491**
2020		**55464**	**35170**	**87469**	**39700**	**26858**	**52542**	**40587**

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Dependent Mth    Rsq  d.f.       F  Sigf      b0       b1
   VAR00002 S    ,643    18   32,40  ,000 71,3545 -122071
```

Graph.5.27.Weaving,Clothing and Leather Industry

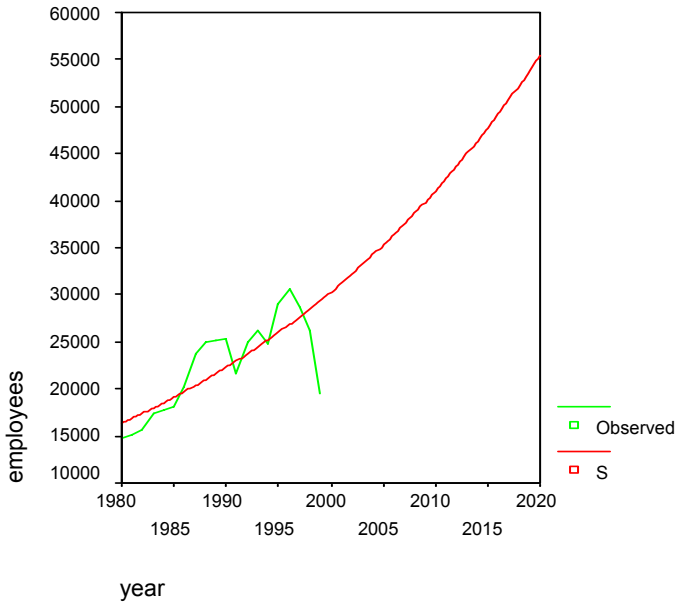


Table 5.21.Wood Products and Furniture Industry

Year	Number of employees	Regression Cubic			Arima Moving average			Exponential Smooting-Holt
		fit	lcl	ucl	fit	lcl	ucl	fit
1980	**1000**	**811**	**373**	**1250**	**825**	**354**	**1295**	**1013**
1981	797	833	399	1266	930	557	1303	1039
1982	811	854	424	1283	783	416	1150	1039
1983	954	875	450	1300	907	561	1253	1038
1984	889	896	474	1318	942	597	1288	1050
1985	**1098**	**917**	**498**	**1336**	**890**	**552**	**1227**	**1054**
1986	1089	939	522	1355	1106	768	1443	1078
1987	970	960	545	1375	958	624	1292	1099
1988	1034	981	568	1395	1001	667	1335	1105
1989	868	1003	589	1416	1038	705	1371	1116
1990	**808**	**1024**	**611**	**1437**	**905**	**571**	**1238**	**1106**
1991	749	1045	632	1459	981	647	1315	1089
1992	942	1067	652	1482	899	564	1234	1064
1993	1003	1088	672	1505	1129	793	1465	1060
1994	765	1110	691	1529	1022	684	1359	1061
1995	**894**	**1131**	**709**	**1553**	**943**	**603**	**1283**	**1036**
1996	1388	1153	727	1578	1122	779	1464	1025
1997	1319	1174	745	1604	1382	1036	1728	1068
1998	1388	1196	762	1630	1153	804	1502	1102
1999	**1507**	**1217**	**778**	**1656**	**1400**	**1047**	**1753**	**1142**
2003		**1304**	**839**	**1768**	**1305**	**794**	**1816**	**1241**
2005		**1347**	**867**	**1827**	**1347**	**812**	**1882**	**1272**
2010		**1456**	**931**	**1980**	**1451**	**848**	**2055**	**1350**
2015		**1565**	**987**	**2142**	**1556**	**875**	**2237**	**1428**
2020		**1675**	**1039**	**2311**	**1660**	**895**	**2425**	**1506**

Dependent Mth	Rsq	d.f.	F	Sigf	b0	b1	b2	b3
9 VAR00002 CUB	,318	18	8,39	,010	-13150		1,8E-06	

Graph 5.28. Wood Products and Furniture Industry

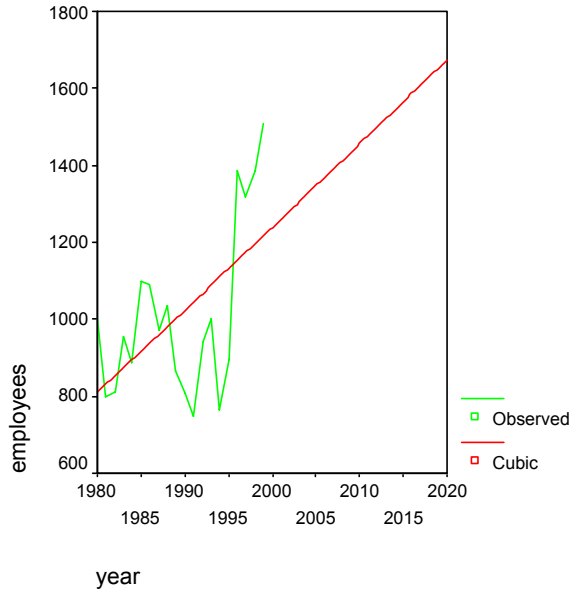


Table 5.22.Paper-Paper Products and Printing Industry

Year	Number of employees	Regression S-Curve			Arima Moving Average			Exponential Smooting-Holt
		fit	lcl	ucl	fit	lcl	ucl	fit
1980	**1693**	**1773**	**1245**	**2525**	**1749**	**761**	**2738**	**1737**
1981	1511	1846	1302	2618	1823	1003	2643	1821
1982	1746	1921	1360	2715	1785	968	2602	1876
1983	1804	2000	1420	2817	2020	1227	2813	1947
1984	2073	2082	1482	2924	2022	1230	2813	2015
1985	**2690**	**2167**	**1547**	**3036**	**2264**	**1480**	**3048**	**2104**
1986	2828	2255	1613	3154	2565	1784	3346	2252
1987	3004	2347	1681	3278	2574	1796	3352	2404
1988	2880	2443	1751	3408	2762	1985	3539	2565
1989	2633	2542	1823	3545	2690	1914	3466	2700
1990	**2745**	**2645**	**1897**	**3689**	**2692**	**1916**	**3469**	**2797**
1991	2421	2753	1973	3841	2849	2072	3627	2894
1992	2516	2864	2051	4000	2685	1906	3465	2945
1993	2579	2980	2131	4168	2924	2140	3707	2996
1994	2448	3101	2213	4345	2926	2138	3714	3044
1995	**2941**	**3226**	**2297**	**4531**	**2951**	**2158**	**3744**	**3068**
1996	3931	3357	2383	4727	3303	2503	4102	3137
1997	3796	3492	2472	4934	3747	2940	4553	3307
1998	4118	3633	2562	5151	3530	2715	4344	3451
1999	**3381**	**3779**	**2655**	**5380**	**3920**	**3097**	**4743**	**3620**
2003		**4424**	**3047**	**6423**	**3990**	**2919**	**5061**	**3993**
2005		**4785**	**3256**	**7030**	**4185**	**3064**	**5305**	**4192**
2010		**5818**	**3825**	**8849**	**4672**	**3411**	**5932**	**4689**
2015		**7068**	**4465**	**11190**	**5159**	**3739**	**6579**	**5187**
2020		**8578**	**5185**	**14194**	**5646**	**4054**	**7238**	**5684**

Dependent	Mth	Rsq	d.f.	F	Sigf	b0	b1
VAR00002	S	,711	18	44,22	,000	87,0933	-157633

Graph 5.29. Paper-Paper Products and Printing Industry

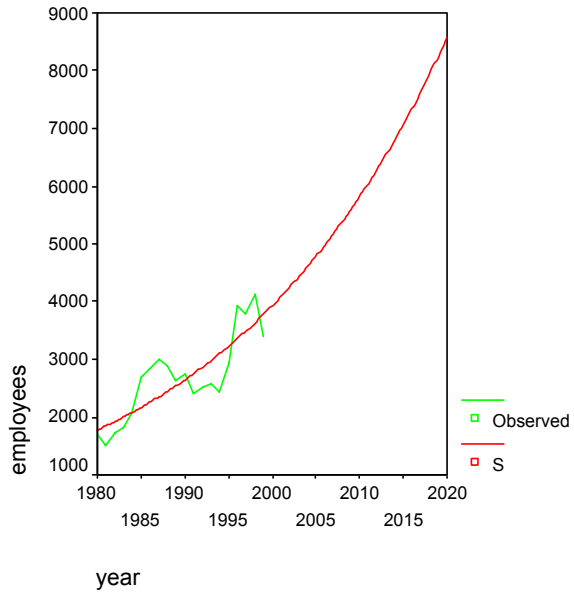


Table 5.23.Chemistry-Oil,Coal,Rubber and Plastic Products Industry

Year	Number of employees	Regression Inverse			Arima Moving Average			Exponential Smooting-Holt
		fit	lcl	ucl	fit	lcl	ucl	fit
1980	**5926**	**6117**	**3204**	**9030**	**6194**	**3167**	**9222**	**6150**
1981	5578	6634	3755	9513	6589	4045	9133	6574
1982	5793	7150	4301	9998	6715	4177	9254	6910
1983	6191	7665	4843	10487	7243	4769	9717	7223
1984	6564	8180	5381	10979	7676	5208	10144	7534
1985	**9867**	**8694**	**5915**	**11474**	**8147**	**5701**	**10593**	**7842**
1986	11501	9208	6444	11972	10073	7636	12510	8470
1987	10587	9721	6969	12474	10429	8001	12856	9228
1988	10655	10234	7490	12979	10292	7870	12715	9833
1989	10508	10747	8006	13487	10897	8477	13318	10392
1990	**13984**	**11258**	**8518**	**13999**	**11021**	**8600**	**13443**	**10882**
1991	13195	11770	9025	14514	13210	10784	15635	11702
1992	13166	12280	9528	15033	12214	9781	14648	12375
1993	12841	12790	10026	15555	13203	10759	15646	12986
1994	13025	13300	10520	16080	13044	10588	15501	13503
1995	**13241**	**13809**	**11010**	**16608**	**13719**	**11245**	**16192**	**13981**
1996	13365	14318	11496	17140	13991	11498	16483	14425
1997	14503	14826	11978	17674	14419	11903	16934	14827
1998	14947	15334	12456	18212	15278	12738	17818	15299
1999	**14441**	**15841**	**12930**	**18752**	**15571**	**13003**	**18139**	**15765**
2003		**17865**	**14791**	**20938**	**17747**	**14469**	**21025**	**17585**
2005		**18874**	**15702**	**22045**	**18751**	**15324**	**22178**	**18560**
2010		**21387**	**17931**	**24843**	**21263**	**17411**	**25115**	**21000**
2015		**23887**	**20101**	**27673**	**23774**	**19439**	**28109**	**23440**
2020		**26376**	**22226**	**30526**	**26286**	**21427**	**31144**	**25879**

Dependent	Mth	Rsq	d.f.		F	Sigf	b0	b1
VAR00002	INV	,857	18		107,51	,000	1029163	-2,E+09

Graph 5.30. Chemistry-Oil,Coal,Rubber and Plastic Products Industry

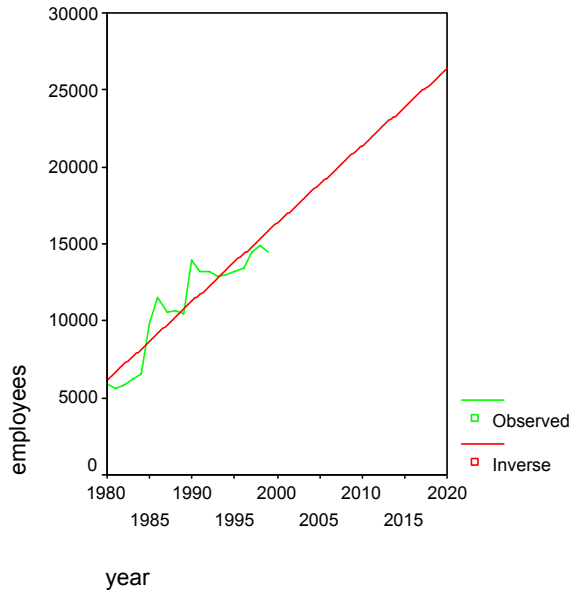


Table 5.24.Stone And Soil Related Industry

Year	Number of employees	Regression Exponential			Arima Moving Average			Exponential Smooting-Holt
		fit	lcl	ucl	fit	lcl	ucl	fit
1980	**3006**	**3035**	**2495**	**3693**	**3003**	**2182**	**3824**	**3046**
1981	3068	3117	2568	3784	3104	2458	3750	3121
1982	2903	3202	2643	3879	3179	2545	3813	3194
1983	3168	3288	2719	3977	3104	2510	3699	3240
1984	3205	3377	2797	4078	3450	2857	4043	3308
1985	**3446**	**3469**	**2876**	**4183**	**3311**	**2735**	**3887**	**3371**
1986	3885	3562	2957	4291	3708	3132	4284	3453
1987	4152	3659	3040	4404	3842	3274	4411	3575
1988	4513	3758	3124	4521	4050	3482	4618	3717
1989	4226	3860	3209	4642	4275	3710	4841	3889
1990	**3897**	**3964**	**3296**	**4767**	**3960**	**3394**	**4526**	**4019**
1991	3686	4071	3384	4898	4048	3482	4615	4101
1992	3888	4181	3474	5033	3904	3336	4472	4150
1993	3957	4294	3565	5173	4286	3716	4856	4212
1994	4175	4411	3658	5319	4130	3557	4703	4272
1995	**4460**	**4530**	**3752**	**5470**	**4535**	**3958**	**5112**	**4346**
1996	4743	4653	3847	5626	4537	3955	5118	4443
1997	5314	4778	3944	5789	4866	4280	5453	4562
1998	5209	4908	4043	5957	5163	4571	5755	4733
1999	**4512**	**5040**	**4143**	**6132**	**4934**	**4336**	**5533**	**4881**
2003		**5608**	**4559**	**6900**	**5296**	**4403**	**6188**	**5233**
2005		**5916**	**4777**	**7327**	**5495**	**4561**	**6429**	**5427**
2010		**6761**	**5353**	**8539**	**5993**	**4940**	**7047**	**5912**
2015		**7726**	**5979**	**9985**	**6492**	**5302**	**7681**	**6398**
2020		**8830**	**6661**	**11704**	**6990**	**5654**	**8326**	**6883**

```
Dependent Mth    Rsq  d.f.       F  Sigf      b0       b1
   VAR00002 EXP  ,782    18   64,50  ,000 3,4E-20   ,0267
```

Graph 5.31. Stone And Soil Related Industry

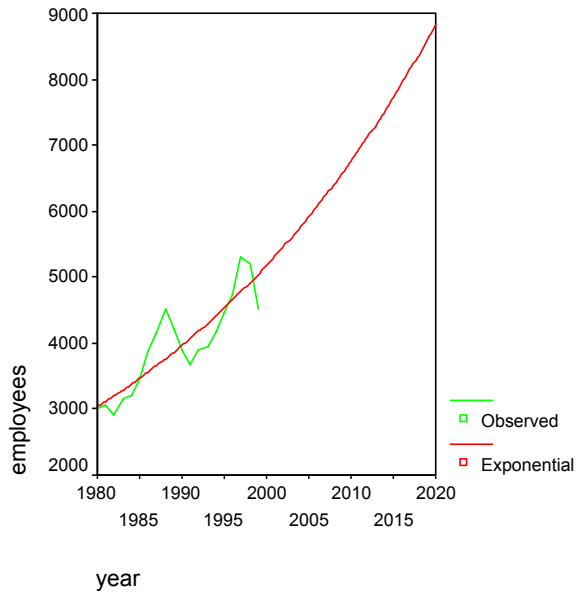


Table 5.25.Metal Main Industry

Year	Number of employees	Regression S-Curve			Arima Moving Average			Exponential Smooting-Holt
		fit	lcl	ucl	fit	lcl	ucl	fit
1980	**2320**	**2785**	**1854**	**4183**	**2787**	**1303**	**4270**	**2391**
1981	2210	2860	1914	4276	2663	1474	3852	2525
1982	2680	2938	1974	4373	2705	1530	3879	2632
1983	2937	3017	2035	4474	3053	1934	4172	2775
1984	3181	3099	2096	4580	3085	1967	4204	2932
1985	**3542**	**3182**	**2158**	**4691**	**3321**	**2222**	**4420**	**3100**
1986	3721	3268	2221	4807	3501	2403	4599	3291
1987	4347	3356	2285	4928	3595	2505	4685	3485
1988	4848	3446	2349	5055	4053	2964	5143	3732
1989	4701	3538	2413	5188	4177	3089	5264	4015
1990	**3600**	**3633**	**2478**	**5327**	**4086**	**2997**	**5174**	**4261**
1991	3403	3730	2543	5473	3487	2397	4578	4367
1992	3841	3830	2608	5625	3856	2763	4950	4432
1993	3634	3933	2673	5785	3998	2900	5096	4529
1994	3481	4038	2739	5952	3853	2749	4957	4587
1995	**4077**	**4145**	**2804**	**6128**	**3941**	**2830**	**5053**	**4612**
1996	3118	4256	2870	6311	4383	3263	5503	4689
1997	3869	4369	2935	6503	3517	2387	4647	4647
1998	4959	4485	3001	6704	4720	3579	5861	4676
1999	**5019**	**4604**	**3067**	**6914**	**4736**	**3583**	**5890**	**4815**
2003		**5112**	**3328**	**7852**	**4948**	**3338**	**6558**	**5283**
2005		**5386**	**3459**	**8387**	**5136**	**3450**	**6822**	**5507**
2010		**6133**	**3786**	**9937**	**5606**	**3706**	**7506**	**6067**
2015		**6980**	**4114**	**11842**	**6076**	**3932**	**8220**	**6627**
2020		**7938**	**4447**	**14171**	**6546**	**4139**	**8953**	**7187**

```
Dependent Mth    Rsq  d.f.       F  Sigf      b0      b1
   VAR00002 S    ,450    18   14,74  ,001 60,8252 -104729
```

Graph 5. 32. Metal Main Industry

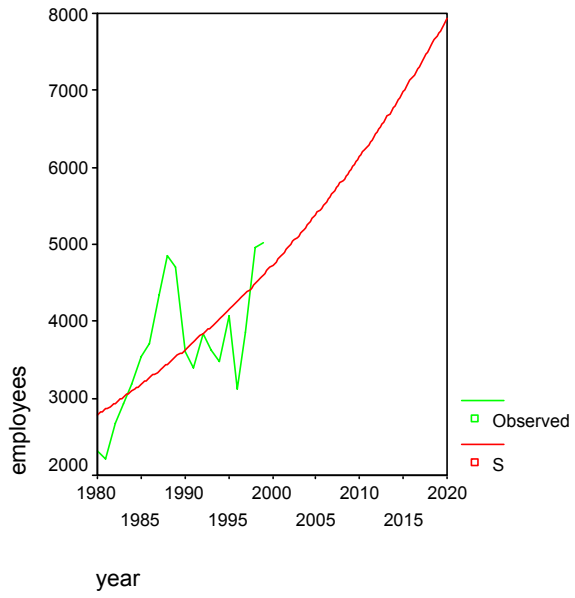


Table 5.26.Metal Objects-Machine Equipments,Transportation Vehicles, Scientific And Professional Measurement Devices

Year	Number of employees	Regression S-Curve			Arima Moving Average			Exponential Smooting-Holt
		fit	lcl	ucl	fit	lcl	ucl	fit
1980	**12479**	**13245**	**10403**	**16863**	**13149**	**8530**	**17769**	**12664**
1981	11972	13582	10698	17243	13239	9550	16928	13014
1982	13183	13927	10997	17636	13193	9552	16834	13268
1983	15124	14280	11301	18044	14359	10900	17818	13616
1984	17186	14642	11610	18465	15294	11836	18751	14139
1985	**17540**	**15012**	**11923**	**18902**	**16491**	**13100**	**19883**	**14847**
1986	17263	15392	12240	19355	16317	12927	19706	15545
1987	16402	15781	12561	19825	16653	13290	20016	16164
1988	16461	16179	12886	20312	16216	12855	19578	16637
1989	15449	16587	13215	20818	16971	13617	20325	17067
1990	**15866**	**17004**	**13548**	**21342**	**16130**	**12773**	**19488**	**17336**
1991	14657	17432	13884	21886	17423	14061	20785	17606
1992	16670	17870	14224	22451	16063	12690	19436	17698
1993	18816	18319	14567	23037	18849	15461	22236	17972
1994	16859	18778	14913	23645	18803	15397	22209	18441
1995	**18394**	**19249**	**15263**	**24276**	**17860**	**14431**	**21288**	**18652**
1996	19720	19731	15615	24931	20014	16559	23469	18993
1997	23872	20224	15971	25610	19835	16349	23321	19440
1998	23516	20729	16329	26314	23297	19777	26817	20302
1999	**19513**	**21246**	**16691**	**27045**	**21008**	**17450**	**24566**	**21074**
2003		**23442**	**18169**	**30245**	**22475**	**17458**	**27492**	**22657**
2005		**24620**	**18928**	**32024**	**23286**	**18034**	**28538**	**23527**
2010		**27818**	**20888**	**37047**	**25313**	**19392**	**31235**	**25701**
2015		**31413**	**22951**	**42995**	**27341**	**20660**	**34022**	**27876**
2020		**35451**	**25131**	**50009**	**29368**	**21866**	**36870**	**30050**

```
Dependent Mth    Rsq  d.f.       F  Sigf      b0      b1
   VAR00002 S    ,672    18   36,94  ,000 59,2096  -98442
```

Graph 5.33. Metal Objects-Machine Equipments,Transportation Vehicles, Scientific And Professional Measurement Devices

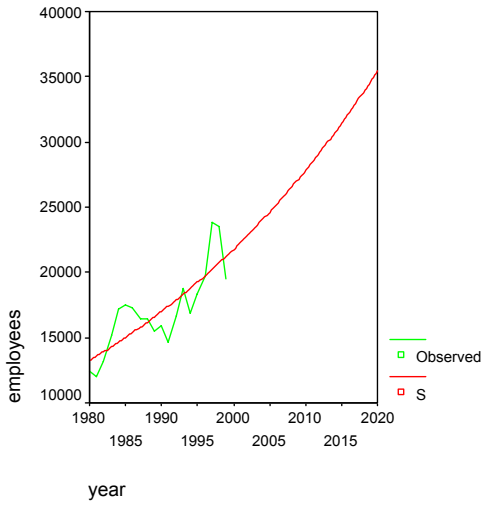
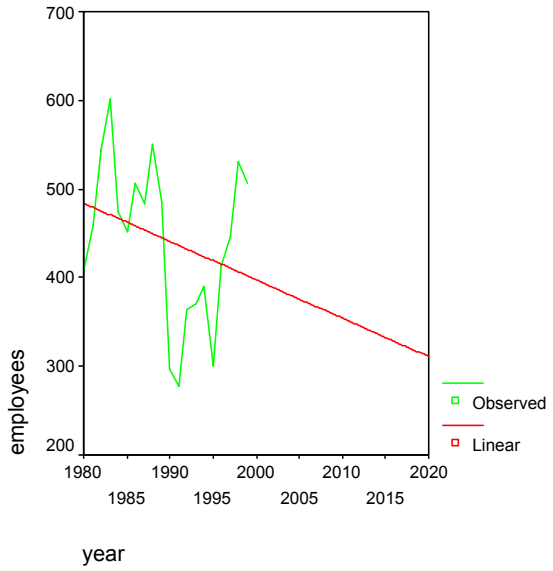


Table 5.27.Other Manufacturing Industry

Year	Number of employees	Regression Linear			Arima Moving Average			Exponential Smooting-Holt
		fit	lcl	ucl	fit	lcl	ucl	fit
1980	**407**	**484**	**282**	**686**	**476**	**267**	**684**	**410**
1981	458	480	280	679	442	272	611	415
1982	544	475	278	673	478	309	646	425
1983	601	471	276	667	504	342	666	443
1984	474	467	273	661	520	358	682	468
1985	**452**	**462**	**270**	**655**	**430**	**270**	**590**	**477**
1986	506	458	267	650	468	308	627	483
1987	483	454	263	645	474	315	633	493
1988	550	449	259	640	453	294	611	501
1989	486	445	255	635	503	345	661	515
1990	**296**	**441**	**251**	**631**	**430**	**271**	**588**	**520**
1991	278	437	246	627	355	196	514	504
1992	364	432	241	623	386	227	545	486
1993	371	428	236	619	416	256	576	476
1994	391	424	231	616	399	238	559	468
1995	**301**	**419**	**225**	**613**	**418**	**256**	**580**	**461**
1996	413	415	219	610	348	185	511	444
1997	447	411	213	608	455	290	620	440
1998	531	406	207	606	407	241	573	440
1999	**507**	**402**	**200**	**604**	**484**	**316**	**652**	**450**
2003		**385**	**171**	**598**	**394**	**168**	**620**	**458**
2005		**376**	**156**	**596**	**387**	**151**	**623**	**459**
2010		**354**	**114**	**595**	**369**	**103**	**635**	**463**
2015		**333**	**69**	**597**	**351**	**51**	**651**	**466**
2020		**311**	**21**	**601**	**334**	**-3**	**670**	**470**

```
Dependent Mth    Rsq  d.f.       F  Sigf      b0      b1
   VAR00002 LIN  ,082    18    1,60  ,222 9053,20 -4,3278
```

Graph 5.34. Other Manufacturing Industry



2- Calculating size of plots for every employee regarding sectors in firms that chose a location in industrial estates: For this aim , plots size and number of employees in 839 firms from 5 industrial estates ;İzmir Atatürk industrial estate,Bursa industrial estate, Eskişehir industrial estate, Konya industrial estate and Manisa industrial estate were obtained. Obtained datas were divided into 9 sectors of manufacturing industry and mean+standard error of mean and mean – error of mean values were calculated.

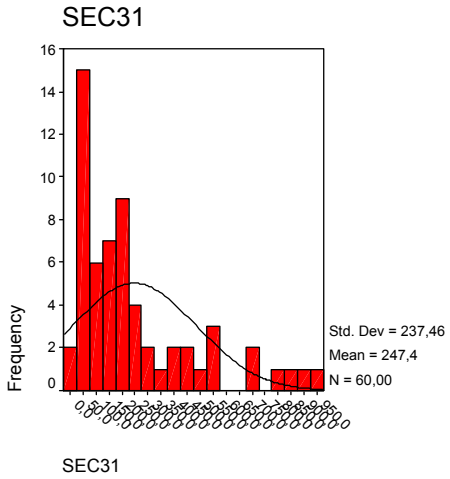
As a consquence of this study; plots size for each employee is the highest in store and soil related industry and is the lowest in waving,clothing and leather industry.

Graph 5.35. The mean plot size of food, drink and tobacco industry per an employee

Statistics

SEC31

N	Valid	60
	Missing	0
Mean		247,3760
Std. Error of Mean		30,65621
Median		179,3639
Mode		18,65
Std. Deviation		237,46197
Variance		56388,19
Range		907,01
Minimum		18,65
Maximum		925,67
Sum		14842,56

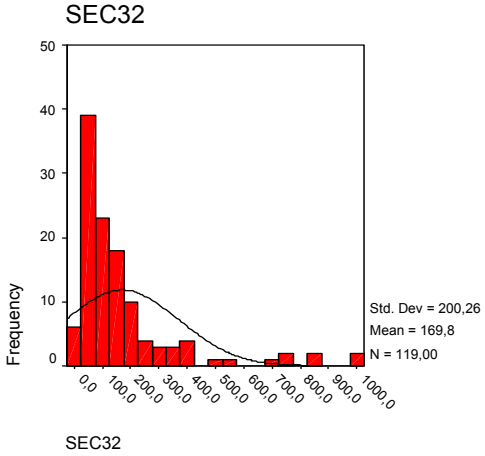


Graph 5.36. The mean plot size of weaving,clothing and leather lndustry per an employee

Statistics

SEC32

N	Valid	119
	Missing	0
Mean		169,8287
Std. Error of Mean		18,35782
Median		93,3333
Mode		125,00
Std. Deviation		200,26013
Variance		40104,12
Range		985,77
Minimum		14,23
Maximum		1000,00
Sum		20209,62

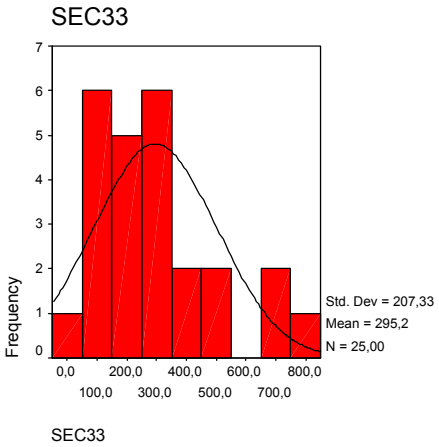


Graph 5.37. The mean plot size of wood products and furniture industry per an employee

Statistics

SEC33

N	Valid	25
	Missing	0
Mean		295,2274
Std. Error of Mean		41,46688
Median		280,3947
Mode		49,96
Std. Deviation		207,33442
Variance		42987,56
Range		738,64
Minimum		49,96
Maximum		788,60
Sum		7380,68

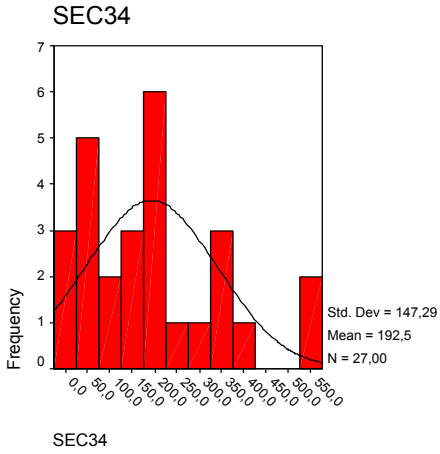


Graph 5.38. The mean plot size of paper-paper products and printing industry per an employee

Statistics

SEC34

N	Valid	27
	Missing	0
Mean		192,4798
Std. Error of Mean		28,34618
Median		180,0000
Mode		11,60
Std. Deviation		147,29106
Variance		21694,66
Range		524,12
Minimum		11,60
Maximum		535,71
Sum		5196,95



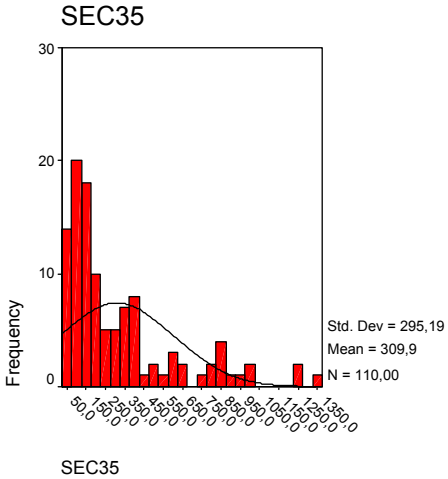
Graph 5.39. The mean plot size of chemistry-oil, coal, rubber and plastic products industry per an employee

Statistics

SEC35

N	Valid	110
	Missing	0
Mean		309,8760
Std. Error of Mean		28,14573
Median		187,0250
Mode		151,52[a]
Std. Deviation		295,19496
Variance		87140,06
Range		1300,89
Minimum		25,78
Maximum		1326,67
Sum		34086,36

a. Multiple modes exist. The smallest value is shown

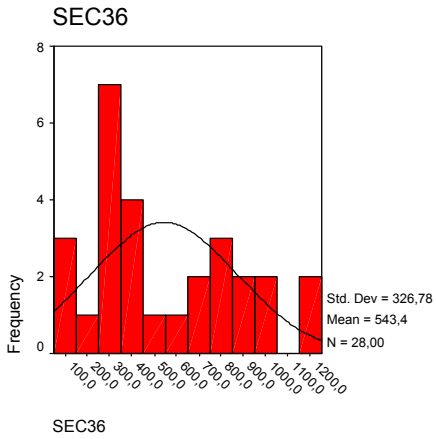


Graph 5.40. The mean plot size of stone and soil Related industry per an employee

Statistics

SEC36

N	Valid	28
	Missing	0
Mean		543,3702
Std. Error of Mean		61,75556
Median		412,2444
Mode		825,00
Std. Deviation		326,77972
Variance		106785,0
Range		1105,82
Minimum		87,04
Maximum		1192,86
Sum		15214,37

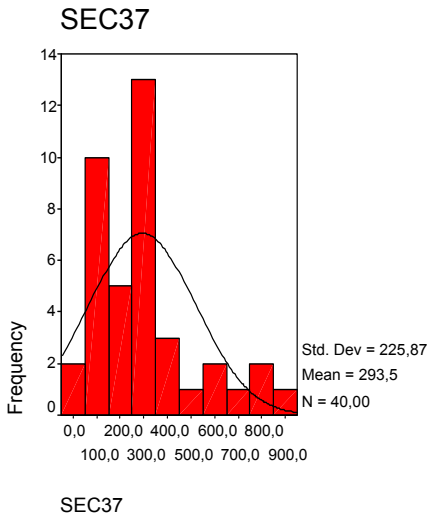


Graph 5.41. The mean plot size of metal main industry per an employee

Statistics

SEC37

N	Valid	40
	Missing	0
Mean		293,5221
Std. Error of Mean		35,71353
Median		258,4227
Mode		156,25
Std. Deviation		225,87217
Variance		51018,24
Range		892,29
Minimum		7,46
Maximum		899,75
Sum		11740,88

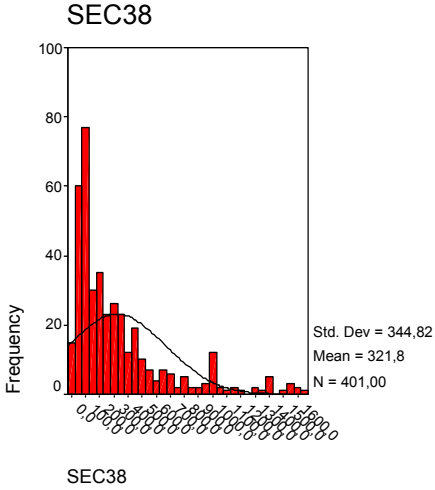


Graph 5.42. The mean plot size of Metal Objects-Machine Equipments,Transportation Vehicles, Scientific and Professional Measurement Devices per an employee

Statistics

SEC38

N	Valid	401
	Missing	0
Mean		321,7619
Std. Error of Mean		17,21935
Median		200,0000
Mode		1000,00
Std. Deviation		344,81731
Variance		118899,0
Range		1635,07
Minimum		7,08
Maximum		1642,14
Sum		129026,53



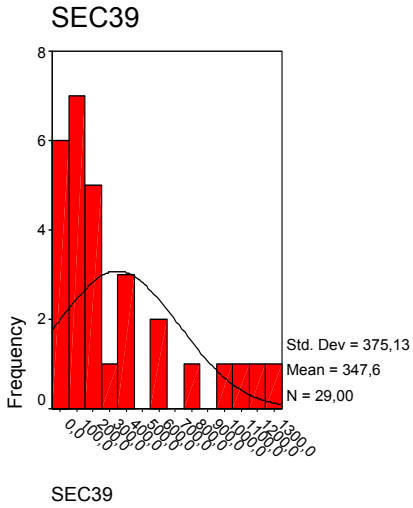
Graph 5.43. The mean plot size of other manufacturing ındustry per an employee

Statistics

SEC39

N	Valid	29
	Missing	0
Mean		347,6222
Std. Error of Mean		69,66003
Median		173,6233
Mode		27,27[a]
Std. Deviation		375,13076
Variance		140723,1
Range		1231,99
Minimum		27,27
Maximum		1259,26
Sum		10081,04

a. Multiple modes exist. The smallest value is shown



3-In datas obtained from the ministry of industry and commerce, 21 of 65 completed industrial estate have known size for industry plots.The rate of industry lands for this 21 industrial estates to rate of industrial estate land with the mean of these rates was calculated .

In 21 industrial estates the rate of land for industry plots to rate of industrial estate land changes between 51 % and 91.6 %. And the mean of these size of industry plots comparing to the size of industrial estate land is 69.6571 % .

Table 5.28 The rate of industry plot as to total land at completed industrial estates

Name Of The Estates	Size (Ha)	Size of plot of industry (ha)	The rate of industry plot as to total land(%)
ADANA I + II	1100	795	72,3
ANTALYA I	196	124	63,3
BOLU I	60	38	63,3
BURSA-M.K.PAŞA	197	126	64,0
BURSA -İnegöl I	300	219	73,0
BURSA-DEMİRTAŞ	475	382	80,4
DENİZLİ-Çardak	322	295	91,6
ERZİNCAN	348	311	89,4
ERZURUM I	100	87,1	87,1
ISPARTA I (S.DEMİREL)	252	159	63,1
İZMİR-Menemen(Deri)	200	102	51,0
KIRŞEHİR	200	125	62,5
KONYA II	300	200	66,7
KONYA-EREĞLİ	100	61,3	61,3
KÜTAHYA I	170	110	64,7

NİĞDE	261	164	62,8
SİNOP I	100	59,7	59,7
ŞANLIURFA I	286	172,6	60,3
TEKİRDAĞ-Çerkezköy I	440	349	79,3
BARTIN I	50	42	84,0
OSMANİYE	100	63	63,0

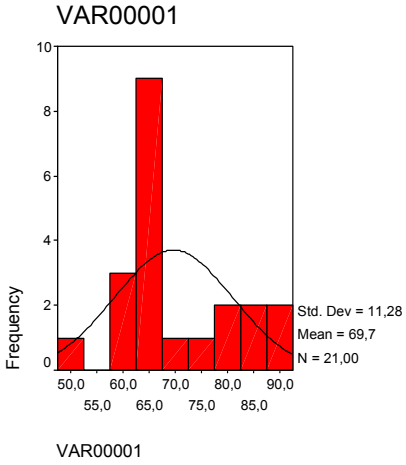
Source: The Ministry of Industry And Commerce

Graph 5.44.The Rate of Industry Plot As To Total Land At Completed Industrial Estates

Statistics

VAR00001

N	Valid	21
	Missing	0
Mean		69,6571
Std. Error of Mean		2,46119
Median		64,0000
Mode		63,30
Std. Deviation		11,27859
Variance		127,20657
Range		40,60
Minimum		51,00
Maximum		91,60
Sum		1462,80



As a result of studies mentioned above the consequences are;According the three models the sectors that have the most employment rate sequencly are weaving,clothing and leather industry,chemistry-oil, coal, rubber and plastic products industry and metal objects-machine equipments,transportation vehicles,scientific and profesional measurement devices industry sectors.And again according to the three models present employment will decrease in food,drink, and tobacco industry sectors.Besides,according to predicted mean values of Regression and Arima-moving average models employment will decrease in other manufacturing industry sectors and there will not be need for new industrial estates.But on the other hand employment will increase in other sectors and new industrial estates will be needed.

According to predicted values of exponential smooting-Holt and Arima-moving average, sequencly chemistry-oil,coal,rubber,and plastic products industry,metal objects-machine equipments,transportation vehicles, scientific and profesional measurement devices industry and weaving,clothing and leather industry sectors will need plots of land of industry and accordingly industrial estates.According to

Regression model sequencly metal objects-machine equipments, transportation vehicles,scientific and profesional measurement devices industry, weaving,clothing and leather industry and chemistry-oil,coal,rubber and plastic products industry sectors will need most space for industry and industrial estate.According to consquences of the three models the reason for the need of space for industry and industrial estate being different despite the fact that the sequence of sectors that will have most employment is the same is that the size of plot for per worker changes in different sectors.

According to Regression models the space need for industrial estates in 2020 of İzmir in total:
Predicted mean:1976.76 ha
95 % lower confident interval of predicted mean:383.56 ha
95 % upper confident interval of predicted mean: 4702.05 ha

According to Arima-moving average model;
Predicted mean:1197.07 ha
95 % lower confident interval of predicted mean:175.09 ha
95 % upper confident interval of predicted mean:2587.98 ha

According to exponential smoothing-holt model;
Predicted mean: 1234.52ha
95 % lower confident interval of predicted mean:1122.02ha
95 % upper confident interval of predicted mean:1347.01 ha
Space of industrial estates on construction stage in total is 2121.4 ha.Total space of industrial estates on construction and site analyses project stage is 4624 ha. This does not include 530 ha widening space of Kemalpaşa II industrial estate since assosiations participated in location selection committee did not approve it. Also Çiçek industrial estate and İzmir Centre Mermerciler were not included due to the fact that their location selection was not done and their land size was not determined. Except Centre Mermerciler industrial estate, Çiçek industrial estate and Kemalpaşa I industrial estate widening land, total space of industrial estates that are active, on construction stage and site analyses stage will be 5205 ha.

In conclusion, space of industrial estates on construction stage in total is double size of space with predicted mean value. Space of industrial estates on construction stage even covers 95 % upper confident interval of predicted mean value of Arima-moving average model and exponential smoothing-holt model. Thus, in the study industrial estates on construction stage will be able to cover the need of industrial estate space in 2020.In fact, it is predicted that there will not be need for industrial estates on site analyses project stage and these will create idle capacity.

The studies and their conclusions are being indicated in the table below

Table 5.29. The predictions of manufacturing industry employment and industrial estate space of Izmir in 2020

Sectors	2020 Employment predictions and prediction intervals Regression Models			2003 Employment (Prediction)	Difference of employee will be between 2003 and 2020			Mean land size (m2) for per employee			
	2020 Prediction	%95 Lower confidence Interval	%95 Uper confidence Interval		2020-2003 predict	%95 Lower confidence Interval	%95 Uper confidence Interval	Mean	Std. Error of Mean	Mean-Std. Error of Mean	Mean+Std. Error of Mean
Food, Drink And Tobacco Industry	17840	14602	21796	22822	-4982	-8220	-1026	247,38	30,66	216,72	278,03
Weaving,Clothing And Leather Industry	55464	35170	87469	33210	22254	1960	54259	169,83	18,36	151,47	188,19
Wood Products And Furniture Industry	1675	1039	2311	1304	371	-265	1007	295,23	41,47	253,76	336,69
Paper-Paper Products And Printing Industry	8578	5185	14194	4424	4154	761	9770	192,48	28,35	164,13	220,83
Chemistry-Oil,Coal,Rubber And Plastic Products Industry	26376	22226	30526	17865	8511	4361	12661	309,88	28,15	281,73	338,02
Stone And Soil Related Industry	8830	6661	11704	5608	3222	1053	6096	543,37	61,76	481,61	605,13
Metal Main İndustry	7938	4447	14171	5112	2826	-665	9059	293,52	35,71	257,81	329,24
Metal Objects-Machine Equipments,Transportation Vehicles, Scientific And Professional Measurement Devices	35451	25131	50009	23442	12009	1689	26567	321,76	17,22	304,54	338,98
Other Manufacturing Industry	311	21	601	385	-74	-364	216	347,62	69,66	277,96	417,28
Total											

Sectors	Need of industry plot land (m2)			The rate of industry plot as to total land(%)	Need of total land of industrial estate (m2)		
	projection mean 2020-2003	land need in%95 Lower confidence Interval	land need in%95 upper confidence Interval		Need of total land of industrial estate	land need in%95 Lower confidence Interval	land need in%95 upper confidence Interval
Food, Drink And Tobacco Industry	-1232447,2	-1781438,4	-285258,78	69,66	0	0	0
Weaving,Clothing And Leather Industry	3779396,82	296881,2	10211001,2	69,66	5425490,698	426186,0465	14658342,25
Wood Products And Furniture Industry	109530,33	-67246,4	339046,83	69,66	157235,6158	0	486716,6667
Paper-Paper Products And Printing Industry	799561,92	124902,9	2157509,1	69,66	1147806,374	179303,6606	3097199,397
Chemistry-Oil,Coal,Rubber And Plastic Products Industry	2637388,68	1228624,5	4279671,22	69,66	3786087,683	1763744,66	6143656,647
Stone And Soil Related Industry	1750738,14	507135,3	3688872,48	69,66	2513261,757	728015,1163	5295539,018
Metal Main İndustry	829487,52	-171443,7	2982585,16	69,66	1190765,891	0	4281632,443
Metal Objects-Machine Equipments,Transportation Vehicles, Scientific And Professional Measurement Devices	3864015,84	514368,1	9005681,66	69,66	5546965,03	738398,0189	12928052,91
Other Manufacturing Industry	-25723,88	-101177,4	90132,48	69,66	0	0	129389,1473
Total	**13770119,3**	**2671912,05**	**32754500,1**		**19767613,05**	**3835647,502**	**47020528,48**

Sectors	2020 employment predictions and prediction intervals Arima-Moving average			2003 Employment (Prediction)	Difference of employee will be between 2003 and 2020			Mean land size (m2) for per employee			
	2020 Prediction	%95 Lower confidence Interval	%95 Uper confidence Interval		2020-2003 predict	%95 Lower confidence Interval	%95 Uper confidence Interval	Mean	Std. Error of Mean	Mean-Std. Error of Mean	Mean+Std. Error of Mean
Food, Drink And Tobacco Industry	14833	7589	22077	22106	-7273	-14517	-29	247,38	30,66	216,72	278,03
Weaving,Clothing And Leather Industry	39700	26858	52542	29915	9785	-3057	22627	169,83	18,36	151,47	188,19
Wood Products And Furniture Industry	1660	895	2425	1305	355	-410	1120	295,23	41,47	253,76	336,69
Paper-Paper Products And Printing Industry	5646	4054	7238	3990	1656	64	3248	192,48	28,35	164,13	220,83
Chemistry-Oil,Coal,Rubber And Plastic Products Industry	26286	21427	31144	17747	8539	3680	13397	309,88	28,15	281,73	338,02
Stone And Soil Related Industry	6990	5654	8326	5296	1694	358	3030	543,37	61,76	481,61	605,13
Metal Main İndustry	6546	4139	8953	4948	1598	-809	4005	293,52	35,71	257,81	329,24
Metal Objects-Machine Equipments,Transportation Vehicles, Scientific And Professional Measurement Devices	29368	21866	36870	22475	6893	-609	14395	321,76	17,22	304,54	338,98
Other Manufacturing Industry	334	-3	670	394	-60	-397	276	347,62	69,66	277,96	417,28
Total											

Sectors	Need of industry plot land (m2)			The rate of industry plot as to total land(%)	Need of total land of industrial estate (m2)		
	projection mean 2020-2003	land need in%95 Lower confidence Interval	land need in%95 upper confidence Interval		Need of total land of industrial estate	land need in%95 Lower confidence Interval	land need in%95 upper confidence Interval
Food, Drink And Tobacco Industry	-1799194,7	-3146124,2	-8062,87	69,66	0	0	0
Weaving,Clothing And Leather Industry	1661786,55	-463043,8	4258175,13	69,66	2385567,829	0	6112798,062
Wood Products And Furniture Industry	104806,65	-104041,6	377092,8	69,66	150454,565	0	541333,3333
Paper-Paper Products And Printing Industry	318746,88	10504,3	717255,84	69,66	457575,1938	15079,4143	1029652,369
Chemistry-Oil,Coal,Rubber And Plastic Products Industry	2646065,32	1036766,4	4528453,94	69,66	3798543,382	1488323,859	6500795,205
Stone And Soil Related Industry	920468,78	172416,4	1833543,9	69,66	1321373,5	247511,3121	2632133,075
Metal Main İndustry	469044,96	-208568,3	1318606,2	69,66	673334,7115	0	1892917,313
Metal Objects-Machine Equipments,Transportation Vehicles, Scientific And Professional Measurement Devices	2217891,68	-185464,9	4879617,1	69,66	3183881,252	0	7004905,398
Other Manufacturing Industry	-20857,2	-110350,1	115169,28	69,66	0	0	165330,5771
Total	**13770119,3**	**2671912**	**32754500,1**		**11970730,43**	**1750914,585**	**25879865,33**

Sectors	2020 Employment predictions Exponential Smoothing-Holt	2003 Employment (Prediction)	Difference of employee will be between 2003 and 2020	Mean land size (m2) for per employee			
				Mean	Std. Error of Mean	Mean-Std. Error of Mean	Mean+Std. Error of Mean
Food, Drink And Tobacco Industry	14477	21821	-7344	247,38	30,66	216,72	278,03
Weaving,Clothing And Leather Industry	40587	30062	10525	169,83	18,36	151,47	188,19
Wood Products And Furniture Industry	1506	1241	265	295,23	41,47	253,76	336,69
Paper-Paper Products And Printing Industry	5684	3993	1691	192,48	28,35	164,13	220,83
Chemistry-Oil,Coal,Rubber And Plastic Products Industry	25879	17585	8294	309,88	28,15	281,73	338,02
Stone And Soil Related Industry	6883	5233	1650	543,37	61,76	481,61	605,13
Metal Main İndustry	7187	5283	1904	293,52	35,71	257,81	329,24
Metal Objects-Machine Equipments,Transportation Vehicles, Scientific And Professional Measurement Devices	30050	22657	7393	321,76	17,22	304,54	338,98
Other Manufacturing Industry	470	458	12	347,62	69,66	277,96	417,28
Total							

Sectors	Need of industry plot land (m2)			The rate of industry plot as to total land(%)	Need of total land of industrial estate (m2)		
	Prediction mean 2020-2003	Land need in%95 Lower confidence Interval	Land need in%95 upper confidence Interval		Need of total land of industrial estate	Land need in%95 Lower confidence Interval	Land need in%95 upper confidence Interval
Food, Drink And Tobacco Industry	-1816758,7	-1591591,7	-2041852,3	69,66	0	0	0
Weaving,Clothing And Leather Industry	1787460,75	1594221,8	1980699,75	69,66	2565978,682	2288575,581	2843381,783
Wood Products And Furniture Industry	78235,95	67246,4	89222,85	69,66	112311,1542	96535,17083	128083,3333
Paper-Paper Products And Printing Industry	325483,68	277543,8	373423,53	69,66	467246,1671	398426,3997	536065,9345
Chemistry-Oil,Coal,Rubber And Plastic Products Industry	2570144,72	2336668,6	2803537,88	69,66	3689556,015	3354390,784	4024602,182
Stone And Soil Related Industry	896560,5	794656,5	998464,5	69,66	1287052,11	1140764,427	1433339,793
Metal Main İndustry	558862,08	490870,2	626872,96	69,66	802271,1456	704665,8628	899903,7611
Metal Objects-Machine Equipments,Transportation Vehicles, Scientific And Professional Measurement Devices	2378771,68	2251464,2	2506079,14	69,66	3414831,582	3232076,113	3597587,051
Other Manufacturing Industry	4171,44	3335,5	5007,36	69,66	5988,28596	4788,28596	7188,28596
Total	**8599690,8**	**7816007,08**	**9383307,97**		**12345235,14**	**11220222,62**	**13470152,12**

Chapter 6

CONCLUSION

Organizing industrial estates properly contribute to the objectives of encouraging industry, systematic urbanization, balanced regional development and protecting environment.

First, industrial estates can be very important elements of encouraging external and agglomoration economies. Establishments in industrial estates can go into division of labour. The degree of benefiting from external economy increases more with organic connection of activity field of establishments, present in industrial estates. In specialized industrial estates in which identical production is done it is possible for external economy to be able to reach the highest point. It is not economical for industry to develope services and infrastructure investments by various establishments one by one. On the other hand when industrialists join with in industrial estates and share expenditures during the managing period the costs become low. Therefore industrialists materialize investments, that would cause competition, together.

Second, industrial estates are used as very important means of guiding urban development and getting rid of problems created by industrialization in cities. City population increases with industrialization and creates a great deal of problems in cities. With industrial estates not only new establishments will be pulled to these estates but also decentralization of industry and healthy urbanization will be obtained by establishments in cities going from unhealty places to favorible working conditions.

Third, planning new residences (satellite cities) with industrial estates, contributes to solving residency problems as well as preventing cities from having insufficient service resources.

Fourth, industrial estates are very important means of decreasing unbalance between regions and income differences by speeding up industrial investments.Creating employment, providing income for the city, improving side industry and encouragment of small entreprise are aimed in less developed regions by activating economic resources from developed regions to less developed regions.

Finally, when right places are choosen for industrial estates, agriculture, tourism and wood lands with underground and on ground resources can be protected.Furthermore, by industry establishments gathering in industrial estate .This decreases the amount of waste material and controls pollution. In addition the cost of treatment decreases by establishing a shared treatment plants.

By evaluating the results of 40-year policies of industrial estates in Turkey, it is revealed that the practice has been unsuccessful and out dated and there is a need for a new industrial estates policy. For present state of practice of industrial estate, the problems and solution proposals are:

As of 2002, there are in total 267 industrial estates of which 65 are active, 117 are on construction stage, 85 are on site analysis stage.Considering the total number of investments of industrial estates on construction and site analysis stage, the number of active industrial estates is very low. For industrial estates being far from selectiveness and expanding is against the policies of industrial estates in the development plans and the objectives stated in the definitions of industrial estates, and since the number of industrial estates on stage of project has increased ,source problems have emerged. Insufficient financial funds which was not an important reason of being failure up to 1988, changed after 1988 with delayed projects for some reasons and increased number of total projects, the cost of projects and source problem have increased. The constructions of infrastructure are going so slowly because inadequate source of the ministry of industry and commerce for construction of industrial estates is divided into many industrial estates. Instead of executing many projects at once, the ministry of industry and commerce should adopt a group of projects according to priorities of industry in order to complete it in shorter time as a principle. With this selective approach more productive practice of industrial estate can be obtained by shortening the time of construction.Furthermore, receving proposals of establishing industrial estates, the ministry of industry and commerce should take the principles of regional development and social criterions into consideration and contributing to related establishments it should evaluate and determine the priority on distributing the sources.

In Turkey, in the present running structure of industrial estates, demand factor is not very effective because during the establishment and location selection of industrial estates no previous studies are done on the demand, type, and size of industry. The

ministry of industry and commerce does not question the establishments that want to establish the industrial estate about the demand. So, establishments that start investing on establishing industrial estate have other factors as well as the demand of industrial land. The main factor of these is the pressure of local and central groups which have an industrial estate in each centre of underdeveloped provinces and in each district of provinces in the west.Therefore, it is believed that the work will be completed and it is easier for industry to go to a place where location and infrastructure are ready. On the one hand this is true and also relates to weight of region/area on structure of production,consumption and commerce and comparative costs. Whatever aim of establishing industrial estates is, it should be established where local capital is dense and demand of development of industry is enough.

In Turkey, general policies of the industrial estates expect benefits are stated in the five-year development plans. However, planning industrial estates of Turkey has not been done according to the policies and expected benefits. When industrial estates are being established only micro scale location criterions are considered. However this way of expanding industrial estate conflicts with policies of the expected benefits of industrial estates. 'Industrial estates master plan of Turkey' that includes determination of where industrial estates should be established throughout the country should be prepared . Determined regions according to economic criterions should be used in order for investments to be rational instead of using administrative frontiers such as province and district.Regional development plans of industrial estates should be prepared and determined after practicing the plans examining natural and artifical resources of regions.

Considering industrial estates as isolated lands and location selection and the planning should be done. There should be a place for small industry that supports manufacturing in industrial estates, and the need for residency of employees, all of which should take a place in the entire in implementation plan.

Industrial estates have been used as means of financial encouragement as well as physical arrangement in order to reach the aims of balanced regional development, guiding private sector investments to underdeveloped regions, and encouraging present investments. However, looking at distribution of industrial estates throughout the

country, it can be seen that they congregate in developed regions. The region of Southeast Anatolia, East Anatolia and the Black Sea Region are underdeveloped with only 24.65 % of completed industrial estates and 10 % of manufacturing industry establishments. Developed provinces contain most of the land of industrial estates that are completed, on construction stage and site analysis stage. İstanbul has the most land of complited industrial estates, considering industrial estates as a whole but İzmir has the highest number with 20 industrial estates. In Turkey at least one industrial estate was established or proposed to be established in each province except Artvin. There has not been any enterprise or demand for establishing industrial estate in Artvin. Industrial estates are trying to expand across the country. But this policy is undermining the usage of industrial estates as means of developing underdeveloped regions.Actually if industry is to be encouraged in underdeveloped regions, the rate of encouragement of industrial estates should be increased.

The productivity is low in establishments that are present in industrial estates. Because there is no adaptation between manufacturing sectors.Mixed industrial estates without doing sector and scale discrimination have the majority because the number of industrialists who have invested is low. Only two of the completed industrial estates are specialized in leather industrial estates.In mixed industrial estates there are sectors not having any connection such as textile, machine, spare car items, chemistry, wood products, food, establishments and butan gas. Although in development plans specialized industrial estates were proposed for developed regions, this has not been fulfilled.Besides these industrial estates have every scale of industry establishments, for instance carpet washing factory that have 5 employees or automotive factory that have 4500 employees. So agglomoration economy can not be obtained.Administration of industrial estates should be more selective on sectoral distribution and the size of establishments. Furthermore, establishing specialization in developed regions should be encouraged and establishments of which added value is high should have priority.

In studies on determining location of 1/100000 and 1/25000 scale industrial estates, criterions of location selection are not considered important. Feasibility reports are done without any previous information from related establishments for the infrastructure of determined area and without any respect to the information .And also many problems were faced because of insufficient geologic analysis procurement.After

doing expropriaiton on determined area, obtaining water and electricity is so difficult sometimes it is impossible. Feasibility reports should be taken more seriously and the ministry of industry and commerce should be in charge of this.

The location of industrial estates determines the direction of development in cities. Present practices has created a place on which many kinds of industry form a group and establishments near the city centre. Since this practice aims to cover the need of demand of industry land in every province, this has caused pressure on industrial estates to be established nearby frontiers of residence settlement area. Areas that stay between industrial estate zone and residence settlement soon after become united residence settlement in a whole although this has not been proposed in implementation plan. This fact creates such problems as harm to agriculture land, spoiling natural environment where natural resources are rich. Doing location selection of industrial estates, studies are done on effects of industrial estates on settlements around. If settlements that are out of frontiers are effected by industrial estates, should join the process of establishment and location selection of the industrial estates should be called to the location selection committee.

Another common practice which has developed lately, is to legalize and control the places on which manufacturing industry of every scale, trade, and storing etc are present. These places are generally near or next to the city, on productive agriculture land, built either systematicly or illegally. Furthermore they are being converted to industrial estates by politic pressure in order to make use of encouragements of industrial estates.Location selection, establishment, structure of administration and running of these kinds of lands do not have the characteristics of industrial estates.These kinds of practices not only give serious harm to present industrial estates but also do not provide any benefits expected from industrial estates. In addition to these kinds of practices should be abandoned and establishments of industry should be encouraged to move to systematical industrial estates. Since delayed infrastructure, construction and settlement caused from not being able to establish enough central and local organization, it takes long for industrial estates to start running.Construction time of industrial estates established by loans made by the ministry is approximately 10 years but construction time of some industrial estates may go up to 19 years. Since it is impossible for industrialists to establish on lands which the infrastructure has been

complited by the municipality or public assosiations because of the long delay that would otherwise ensue. In some cases industries are developed in specific areas that are allocated for other uses. As a result this creates several economical problems as well as future problems on the land usage. Construction time of industrial estates established by enterprising committee itself is 4,2 years which is quite reasonable time. The reasons for construction time of industrial estates getting longer are difficulties on financial resource, precurements of the ministry in industrial estates using loan of the ministry even if precurements of the ministry is insufficient the ministry gives precurements to any contractor it wants and administrations of regions are not committed on observing and inspecting constructions of factories. These factors delay the construction time of industrial estates. In order for administrations of regions to shorten construction time of industrial estates, they should check financing situation, build infrastructure stage by stage and use their legal rights.

Considering growth of industrial estates for the last 40 years, in industrial estates that are active, number of establishments,the capacity of employment and present employment and capacity of manufacturing do not have a lot to with industrial estates. In active industrial estates on 48 % of industry plot manufacturing is being done. However, the rate of the total number of industry plot in active industrial estates to alloted plots is 87 %. Only 3 % of completed industrial estates have reached a 100 % filling rate. As to allotment rate,filling rate is very low.Since the rate of allotment rate is so high industrialists who want to make investments can not find a place.Therefore there is a need for new industrial estates.But some alloted plots are aiming land speculation and do not reflect the actual demand. In order to prevent land speculation and get the estates filled in short time the regulations of industrial estate practice gave some authorities to take back alloted lands to administration of estate, under these cicumstances: 1- after construction of infrastructure completed if participants do not confirm infrastructure projects that will be practiced within a year and get the building permission, 2- participants who get the building permission but do not start construction in two years, 3- participants who do not start manufacturing from the date of building permission three years.

Industrial estates with very different size emerge because the size of industrial estates is determined spontaneously. The size of industrial estates changes between 20-1850

ha.Yet, the size of industrial estates effects infrastructure investment cost per ha directly because of scale economies.Examining infrastructure investment cost per ha according to the size of built completed industrial estates by loan of the ministry, infrastructure investment cost per ha of industrial estates that are 50 ha is the highest, between 50-188 ha when the size of industrial estates goes up infrastructure investment cost per ha goes down fast.Between 188-377 ha when the size of industrial estates goes up infrastructure investment cost per ha decreases a lot, with 377 ha industrial estates the cost of infrastructure investment per ha reaches its minimum level.When it goes up to 377 ha due to scale economies cost of infrastructure starts increasing again.In conclusion considering optimum size of plot is 188-377 ha, size of industrial estates should be checked again.Particularly, the demand for industrial estates that have reached a certain filling rate increase due to agglomoration economies and the demand for industrial estates with low demand decreases. In industrial estates where the demand is high, there are works for the third and fourth widening lands to start running. Directing the demand to other industrial estates and keep them limited is better because this accumulation creates agglomoration of diseconomies.

The problems and solution proposals of industrial estates in Turkey above are valid for industrial estates in İzmir.Assuming medium and large scale establishments of manufacturing industry will choose a place in industrial estates of which infrastructure is completed. Examining structure of manufacturing industry in İzmir the need of land in 2020 is estimated and a critical evaluation for present industrial estates was done.

Examining manufacturing industry in İzmir, since the republic created value in 1980 and value and employment, İzmir had an important position in Turkey. After 1980 with the period of growth based on export the development rate in manufacturing industry of İzmir stayed lower compared to the rest of Turkey, the rate of İzmir in both Aegean Region and Turkey decreased. Examining the employees and created the added value in manufacturing industry in İzmir between 1980-1997 there was a trend of decrease. Between 1997-1999 there was an increase because of the economic crisis but in general it was on increase trend .

Examining employment and created the added value of nine sectors that form manufacturing industry between 1980-1999, in food, drink and tobacco industry and

other manufacturing industry sectors employment in general had a decrease trend. Despite the sudden decrease in food, drink and tobacco industry sector which created the highest employment, continued the higest employment in 1999. In the other 7 sectors employment was generally on increase trend. Altough added value in all sectors has been decreasing lately, in general the trend was on increase.

Taking into consideration of all the stages, with one active industrial estates, 6 on construction stage and 13 on site analysis stage in total 20 industrial estates İzmir has the highest number of industrial estates.In 1993, according to 'Model of Development in Aegean Region' prepared by EBSO, assuming industrial estates would play a pioneer role in industrialization and speed up industrialization, industrial estates expanded thruoghout the province. And after 1993 with pioneering of EBSO 16 industrial estates were established and with pioneering of the chamber of commerce 2 industrial estates were established. 6 of these industrial estates are specialized industrial estates, 14 of them are mixed. Out of specialized industrial estates only Aegean Clothing Industrial Estate is on construction stage other 5 are on site analysis stage, and the work is going on.

Total land of industrial estates that are active is 631 hectares and total extent of industrial estates that are on stage of construction and site analyses-project is 4624 hectares. This extent does not include Kemalpaşa II (widening) industrial estate because location selection of widening 530 ha has not been approved; and does not include İzmir centre and Çiçekçilik specialized industrial estates since their location selections have not been created and size of the land has yet to be determined.. Total land of industrial estates on construction stage is 2121.4 ha. Industrial estates that are active and on stage of construction and site analyses-project have 5205 ha excluding Centre Mermerciler and Çiçekçilik Specialized Industrial Estates.

Evaluating the practice of industrial estates,industrial estates did not speed up industrialization as expected, the demand for them was less than expected and in general it can be said that practices of industrial estates in İzmir have been unsuccessful. The reasons for this failure can be summed up as fallows;

First, location selections and establishment decisions were not done according to plan, program and demands from industrialists. Every district saw the other district as rivals and made effort to establish an industrial estate in its boundary. In 10 years time industrial estates had become widespread, and at least one industrial estate was established for each district. But comparing filling rate of industrial estates, membership numbers, active industrial estates in İzmir to other provinces, İzmir is far behind most provinces. The reason for industrial estates to become widespread in İzmir is that EBSO sees industrial estates as means of taking away the land and sharing the public investments.

Second, before giving the decision of establishment an industrial estate, demand searching is not done. After giving the decision of establishment and approving location selection, if industrial estates do not have enough members they do not start infrastructure works.
Third, since it location selection was ignored, industrial estates were established on productive agricultural lands or on national treasury land giving harm to agricultural lands. Location selection committee preferred these lands because national treasury lands are cheaper.

Finally, although almost all of industrial estates in İzmir were established by EBSO, EBSO could not coordinate land demand that came from industrialists and guide it to convince industrial estates.

The works and result of evaluation of land need of present industrial estates in İzmir and estimate long term need of industrial estates for 2020 are:
First,employment of 2020 manufacturing industry regarding sectors ,in food,drink and tobacco industry and other manufacturing industry sector employment will decrease, in weaving,clothing and leather industry,chemistry-oil,coal,rubber and plastic products industry and metal objects,machine equipments-transportation vehicles,scientific and Professional measurement devices sectors employment is estimated to be increased.

Second, establishments choose a place in industrial estates regarding sectors, size of plot per employee is the highest in stone and soil related industry and the lowest in weaving ,clothing and leather industry sectors.

Third, the rate of industry plots in completed industrial estates to industry land is 69,66%.

Finally, predicted values of need of total space of industrial estate in long term (2020) of İzmir are:

According to Regression models:

Predicted mean:1976,76 ha

95 % lower confident interval of predicted mean:383,56 ha

95 % upper confident interval of predicted mean: 4702,05 ha

According to Arima-moving average model;

Predicted mean:1197,07 ha

95 % lower confident interval of predicted mean:175,09 ha

95 % upper confident interval of predicted mean:2587,98 ha

According to exponential smoothing-holt model;

Predicted mean: 1234,52ha

95 % lower confident interval of predicted mean:1122,02ha

95 % upper confident interval of predicted mean:1347,01 ha

In conclusion, space of industrial estates on construction stage in total is double the size of space with a predicted mean value. Space of industrial estates on construction stage even covers 95 % upper confident interval of predicted mean value of Arima-moving average model and exponential smoothing-holt model. Thus, in the study industrial estates on construction stage will be able to cover the need of industrial estate space in 2020. In fact, it is predicted that there will not be need for industrial estates on site analyses project stage and these will create idle capacity. Considering the idle capacity they will create, these places should be used for other investments that will provide employment and revive the economy so this will allow the public resources to be used more productively. The demand for these industrial estates should be directed to industrial estates on construction stage.

REFERENCES

1. Aksoy Yaşar (1999) "*Ege Sanayi Tarihi*" EBSO Yayınları, İzmir
2. Ardoğan Leman and Others (1983) "Türkiye'de *ve Dünya'da Sanayi Bölgeleri ve Uygulamaları*", TOBB Yayınları, Ankara
3. Balaban Osman (2000) "*Critical Evaluation of Organised Industrial Estates as an Urban Policy in Turkey*", Unpublished Master Thesis,, METU, Ankara
4. Barbaros Funda (1995) "*1830-1930 Döneminde Sosyo-Ekonomik Çözüm Arayışları Çerçevesinde İzmirde Sanayileşme*", İzmir Büyükşehir Belediyesi, İzmir Yayıncılık ve Tanıtım Hizmetleri Ticaret A.Ş. Yayını
5. Bingöl Nihat (2001) "*İllerde Ekonomik Büyüme ,İmalat Sanayinde Yerleşme ve Dışsal Ekonomiler (1980-1995)*", Uzmanlık Tezi, DPT Yayını
6. Bredo Wıllıam (1960) "*Industrial Estates Tool For Industrialization*", Free Pres, California
7. Çezik Asuman, Eraydın Ayda, (1982) "*Türkiye'de Organize Sanayi Bölgeleri (1961-1981)*" ,DPT Yayınları No:1839, Ankara
8. Directorate Of The Organızed Industrıal Estate (1999) "*Feasibility Study for Aliağa Organized Industrial Estate*", Unpublished Report, İzmir
9. DPT Sosyal Planlama Genel Müdürlüğü (1992) "*Organize Sanayi Bölgeleri; Yatırım Kararı, Yer Seçimi, İmar Planı Hazırlama Usul ve Esasları*", DPT Yayınları, Ankara
10. Esen Onat (1969) "*Organize Sanayi Bölgeleri Fiziki Planlama Esasları*", TOBB Yayınları, Ankara
11. Francis Colin & Erkman Suren (2002) "*Environmental Management For Industrial Estates- A Background Paper On The UNEP-DTIE Approach*" Genova
12. İzmır Atatürk Organıze Sanayi Bölgesi (1992) "*İzmir Atatürk Organize Sanayi Bölgesi Bilgi Kitabı*", İzmir
13 ÖZDEMİR Mahmut, (1990): 'Türkiye'de Organize Sanayi Bölgeleri', TOBB Yayınları , Ankara
14. Resmi Gazete (2002) "*Organize Sanayi Bölgeleri Uygulama Yönetmeliği*" Başbakanlık Mevzuatı Geliştirme ve Yayın Genel Müdürlüğü Yayınları, Ankara
15. Resmi Gazete (2001) "*Organize Sanayi Bölgeleri Yerseçimi Yönetmeliği*" Başbakanlık Mevzuatı Geliştirme ve Yayın Genel Müdürlüğü Yayınları, Ankara

16. Resmi Gazete (2000) "*Organize Sanayi Bölgeleri Kanunu No: 4562*", Başbakanlık Mevzuatı Geliştirme ve Yayın Genel Müdürlüğü Yayınları, Ankara
17. Sanayi ve Tıcaret Bakanlığı, Küçük Sanatlar ve Sanayi Bölgeleri ve Siteleri Genel Müdürlüğü (1998) "*Organize Sanayi Bölgeleri ile İlgili Mevzuat*", Afşar Matbaacılık, Ankara
18. SIS (1995) "*Iller Itibariyle Gayri Safi Yurtiçi Hasıla, (1987-1994)*", DİE Yayınları, Ankara
19. SIS (1997) "*Iller Itibariyle Gayri Safi Yurtiçi Hasıla, (1995-1996)*", DİE Yayınları, Ankara
20. SIS (1998) "*Iller Itibariyle Gayri Safi Yurtiçi Hasıla, (1997)*", DİE Yayınları", Ankara
21. SIS (2000) "*Iller Itibariyle Gayri Safi Yurtiçi Hasıla, (1998-1999)*", DİE Yayınları, Ankara
32. SIS, "*1980-1999 Yılı İmalat Sanayi Il Özet Tablosu (10+)*" DİE Yayınları, Ankara
33. SPO, (1976) "*Organize Sanayi Bölgeleri Özel İhtisas Komisyonu Raporu*", DPT Yayınları, Ankara
34. SPO, "*First Five-Year Developmen Plan (1963-1967)*", DPT Yayınları, Ankara
35. SPO, "*Second Five-Year Developmen Plan (1968-1972)*", DPT Yayınları, Ankara
36. SPO, "*Third Five-Year Developmen Plan (1973-1977)*", DPT Yayınları, Ankara
37. SPO, "*Fourth Five-Year Developmen Plan (1979-1983)*", DPT Yayınları, Ankara
38. SPO, "*Fifth Five-Year Developmen Plan (1985-1989)*", DPT Yayınları, Ankara
39. SPO, "*Sixth Five- Year Developmen Plan (1990-1994)*", DPT Yayınları, Ankara
40. SPO, "*Seventh Five-Year Developmen Plan (1996-2000)*", DPT Yayınları, Ankara
41. SPO, "*Eigth Five-Year Developmen Plan*", DPT Yayınları, Ankara

42. "*The Report of Implementation Plan of Bergama Industrial Estate*", 2003
43. Location Selection Committee of Aegean Clothing Industrial Estate (2000) *"The Report of Location Selection Committee of Aegean Clothing Industrial Estate"*, Unpublished Report, İzmir

44. Location Selection Committee of Aegean Clothing Industrial Estate (1999) "*The Report of Location Selection Committee of Aegean Clothing Industrial Estate*", Unpublished Report, İzmir
45. Location Selection Committee of Aliaga I Industrial Estate (1997) *"The Report of Location Selection Committee of Aliaga I Industrial Estate*", Unpublished Report, İzmir
46. Location Selection Committee of Bayındır (Food) Industrial Estate (1999) "*The Report of Location Selection Committee of Bayındır (Food) Industrial Estate*", Unpublished Report, İzmir
47. Location Selection Committee of Bergama Industrial Estate (1996) "*The Report of Location Selection Committee of Bergama Industrial Estate*", Unpublished Report, İzmir
48. Location Selection Committee of Kemalpaşa Industrial Estate (1991) "*The Report of Location Selection Committee of Kemalpaşa Industrial Estate*", Unpublished Report, İzmir
49. Location Selection Committee of Kiraz II Industrial Estate (2000) "*The Report of Location Selection Committee of Kiraz II Industrial Estate*", Unpublished Report, İzmir
50. Location Selection Committee of Menemen Industrial Estate, (2000) "*The Report of Location Selection Committee of Menemen Industrial Estate*", Unpublished Report, İzmir
51. Location Selection Committee of Ödemiş Industrial Estate (1994) "*The Report of Location Selection Committee of Ödemiş Industrial Estate*" Unpublished Report, İzmir
52. Location Selection Committee of Seferihisar Technopark Industrial Estate (2000) *"The Report of Location Selection Committee of Seferihisar Technopark Industrial Estate*", Unpublished Report, İzmir
53. Location Selection Committee of Torbalı II (Pancar) Industrial Estate (1999) "*The Report of Location Selection Committee of Torbalı II (Pancar) Industrial Estate*", Unpublished Report, İzmir
54. "*The Report of Master Plan of İzmir Tekeli Manufacturing Industrial Estate*", 2000, İzmir
55. Tüstaş Sınai Tesisleri A.Ş. (1996) "*Ödemiş Organize Sanayi Bölgesi Fizibilite Etüdü*", Ankara

56. UNIDO (1968) "*Industrial Estates in Europe and the Middle East*", United Nations Publication, Genova
57. UNIDO (1997) "*Industrial Estates Principles and Practice*", United Nations Publication, New York
58. Unıted Natıons (1978) "*The Effectiveness of Industrial Estates in Devoloping Countries*", United Nations Publications, New York
59. Unıted Natıons, (1978) "*Guidelines for the Establishment of Industrial Estates in Developing Countries*", United Nations Publication, New York

Web Sites

1. www.alosbi.org.tr
2. www.berto.org.tr
3. www.ebso.org.tr
4. www. idosb.org. tr
5. www.sanayi.gov.tr
6. www.tosbi.org.tr

APPENDIX A

ORGANİZE SANAYİ BÖLGELERİ KANUNU
Kanun No. 4562

Kabul Tarihi : 12.4.2000
BİRİNCİ BÖLÜM
Amaç, Kapsam, Tanımlar

BİRİNCİ BÖLÜM
Amaç, Kapsam, Tanımlar
Amaç
MADDE 1.- Bu Kanunun amacı organize sanayi bölgelerinin kuruluş, yapım ve işletilmesi esaslarını düzenlemektir.

Kapsam
MADDE 2.- Bu Kanun, organize sanayi bölgelerinin ve üst kuruluşlarının oluşumunu, organlarını, işleyişini, yönetim ve denetimini düzenleyen hükümler ile bunlarla ilgili kişi ve kuruluşların görev, yetki ve sorumluluklarını belirleyen hükümleri kapsar.

Tanımlar ve kısaltmalar
MADDE 3.- Bu Kanunun uygulanmasında;

Organize Sanayi Bölgeleri: Sanayinin uygun görülen alanlarda yapılanmasını sağlamak, kentleşmeyi yönlendirmek, çevre sorunlarını önlemek, bilgi ve bilişim teknolojilerinden yararlanmak, imalat sanayi türlerinin belirli bir plan dahilinde yerleştirilmeleri ve geliştirilmeleri amacıyla, sınırları tasdikli arazi parçalarının gerekli alt yapı hizmetleriyle ve ihtiyaca göre tayin edilecek sosyal tesisler ve teknoparklar ile donatılıp planlı bir şekilde ve belirli sistemler dahilinde sanayi için tahsis edilmesiyle oluşturulan ve bu Kanun hükümlerine göre işletilen mal ve hizmet üretim bölgelerini,
Bakanlık : Sanayi ve Ticaret Bakanlığını,
OSB : Organize sanayi bölgesini,
Katılımcı: Organize sanayi bölgelerinde parsel tahsisi veya satışı yapılmış gerçek ya da tüzel kişiyi,
İfade eder.

İKİNCİ BÖLÜM
Kuruluş ve Nitelikler
Kuruluş
MADDE 4.- OSB, **Yer Seçimi Yönetmeliğine** göre uygun görülen yerlerde Bakanlığın onayı ile kurulur.

OSB'lere ait yer seçimi Bakanlığın koordinatörlüğünde ilgili kurum ve kuruluşların temsilcilerinin katılımıyla oluşan Yer Seçimi Komisyonunun yerinde yaptığı inceleme sonucunda, varsa 1/25000 ölçekli çevre düzeni planı kararları dikkate alınarak oybirliği ile yapılır ve OSB ilan edilir. Mer'i mevzuat gereğince korunması gereken ve sanayi tesislerinin kurulmasına izin verilmeyen alanlar OSB yeri olarak incelemeye alınmaz.

Mülkiyet sınırları içinde Sağlık Bakanlığınca öngörülen **sağlık koruma bandı** bırakılır.

Yer seçiminin kesinleşmesinden sonra OSB sınırları dışında kalan alanların planlanması Bayındırlık ve İskan Bakanlığı veya ilgili belediye tarafından en geç bir yıl içinde yapılır. Bununla ilgili usul ve esaslar Bakanlık ve Bayındırlık ve İskan Bakanlığınca müştereken belirlenir.

OSB sınırları içerisinde yapılacak mevzii imar ve parselasyon planları ve değişiklikleri, OSB tarafından yönetmeliğe uygun olarak hazırlanır ve Bakanlığın onayına sunularak, İl İdare Kurulu kararı ile yürürlüğe girer.

Onaylı OSB imar planları ilgili kurumlara bilgi için gönderilir.

Yürürlüğe giren **mevzii imar planına göre arazi kullanımı, yapı ve tesislerinin projelendirilmesi, inşası ve kullanımıyla ilgili ruhsat ve izinler OSB'ce verilir ve denetlenir**.
Yer seçiminin Hazine veya kamu kurum ve kuruluşlarına ait arazilerden yapılması halinde, bu araziler, talep edilmesi ve başkaca bir sakıncası bulunmaması durumunda, 2886 sayılı Devlet İhale Kanununun 13 üncü maddesinin birinci fıkrasında belirtilen Komisyonca günün rayicine göre takdir edilecek bedelleri üzerinden peşin veya taksitle ödenmek üzere pazarlık usulüyle OSB'lere satılabilir. Bu konudaki esas ve usuller Bakanlık ve Maliye Bakanlığınca ortaklaşa belirlenir. Arsa Ofisi Genel Müdürlüğü mülkiyetinde bulunan stok araziler ise usulüne göre OSB tüzel kişiliğine tapuda devredilirken Arsa Ofisi Kanununun 11 inci maddesinde belirtilen şerh tapuya işlenmez.

Seçilen bölgede özel mülkiyette olan araziler bulunması halinde bu araziler rızaen satın alma veya kamulaştırma yoluyla iktisap edilir. Bu nitelikte taşınmazlar hakkında 2942 sayılı Kamulaştırma Kanunu hükümleri uygulanır.

OSB;
a) İl Özel İdaresinin,
b) OSB'nin içinde bulunacağı il, ilçe veya belde belediyesinin,
büyükşehirlerde ayrıca büyükşehir belediyesinin,
c) İl ve ilçelerdeki mevcudiyet durumuna göre sanayi odası, ticaret odası
veya ticaret ve sanayi odasının,
d) Sanayici dernek veya kooperatiflerinin,

Page: 3

Biri veya daha fazlasının temsilcilerince imzalı ve valinin olumlu görüşünü muhtevi kuruluş protokolünün Bakanlıkça onaylanmasıyla tüzel kişilik kazanır.

İhtisas OSB'lerinde konuyla ilgili mesleki kuruluşlar ve teşekküllerin temsilcileri, talepleri halinde müteşebbis heyete dahil edilirler.

Bu madde ile ilgili esas ve usuller yönetmelikle belirlenir.

Nitelikleri
MADDE 5.- OSB, kamu yararı gerekçesiyle adına kamulaştırma yapılabilen veya yaptırılabilen bir özel hukuk tüzel kişiliğidir.

Kamu yararı kararı, OSB müteşebbis heyetinin başvurusu üzerine Bakanlıkça verilir. Arazinin mülkiyetinin edinilmesinde yapılan masraflar ile arazi bedeli ödeme yükümlülüğü OSB tüzel kişiliğine aittir.

ÜÇÜNCÜ BÖLÜM
Organlar

MADDE 6.- OSB'nin organları;
a) Müteşebbis heyet (işletme aşamasında genel kurul),
b) Yönetim kurulu,
c) Denetim kurulu,
d) Bölge müdürlüğüdür.

Müteşebbis heyet
MADDE 7.- Müteşebbis heyet OSB'nin oluşumuna katılan kurum ve kuruluşların yetkili organlarınca, mensupları arasından tespit edilecek üyelerden oluşur. Müteşebbis heyeti oluşturacak üye sayısı onbeş asıl ve onbeş yedek üyeden fazla olamaz.

Katılan kurum ve kuruluşların müteşebbis heyette temsil edilecekleri üye sayısı, katılım oranları dikkate alınarak kuruluş protokolünde belirlenir.

Müteşebbis heyette yer alan üyeler iki yıl için seçilir ve temsil ettikleri kurum ve kuruluşlardaki görevleri sona erdiğinde üyelikleri düşer. Üyelikten düşen veya ayrılan üyenin yerine, temsil ettiği kurum ve kuruluşun

ön sıradaki yedek üyesi geçer. Katılan üye, yerine geçtiği üyeden kalan süreyi tamamlar.

Müteşebbis heyet ilk toplantısında, valinin başkan olması durumunda, 4 üncü maddenin yedinci fıkrasında sayılan kuruluşlardan il özel idaresi ve belediye temsilcileri dışında kalanlardan bir başkanvekili, aksi takdirde bir başkan ve bir başkanvekili seçer.

Müteşebbis heyet en az üç ayda bir defa başkan veya başkanın yokluğunda başkanvekili başkanlığında salt çoğunluk ile toplanır. Kararlar mevcudun salt çoğunluğu ile alınır. Oyların eşitliği halinde başkanın oyuna itibar edilir.

Müteşebbis heyette görevli üyeler, geçerli sayılan bir mazeretleri olmaksızın üst üste yapılan üç toplantıya veya mazeretleri olsa dahi bir yıl çinde yapılan toplantıların en az yarıdan bir fazlasına katılmamaları halinde üyelikten çekilmiş sayılırlar.

Müteşebbis heyet; OSB'nin kuruluş amacını gerçekleştirmek için gerekli kararları ve tedbirleri almak, yer seçimi raporunda belirtilen hususları yerine getirmek, kanun, yönetmelik, kuruluş protokolü ve benzeri düzenlemelerle verilen görevleri yapmak, yönetim ve denetim kurulu çalışmalarını ve hesaplarını ibra etmek, OSB'ye ait para ve diğer kaynakları kuruluş amacına uygun kullanmakla yükümlü ve görevlidir.

Müteşebbis heyet üyeleri ile yönetim ve denetim kurulu üyelerinin görevlendirilme usul ve esasları, kuruluş protokolünün tanzim şekli ve ihtiva edeceği hususlar ile görev ve çalışmalarına ilişkin esaslar Bakanlıkça çıkarılacak yönetmelikle düzenlenir.

Yönetim kurulu
MADDE 8.- Yönetim kurulu, müteşebbis heyetin en az dördü kendi üyeleri arasından olmak üzere seçeceği beş asıl, beş yedek üyeden oluşur. Yönetim kurulu üyeleri iki yıl için seçilir.

Yönetim kurulu üyeleri kendi aralarında bir başkan ve bir başkanvekili seçerler. Yönetim kurulu en az ayda iki defa toplanır ve toplantı salt çoğunluk ile yapılır. Geçerli bir mazereti olmadan üst üste yapılan üç toplantıya veya mazereti olsa dahi altı ay içinde yapılan toplantıların en az yarısına katılmayan üyeler üyelikten çekilmiş sayılırlar.

Kararlar salt çoğunlukla verilir. Oyların eşitliği halinde başkanın oyuna itibar edilir.

Yönetim kurulu; kanun, yönetmelik, kuruluş protokolü ve benzeri düzenlemeler ile müteşebbis heyetin kararları çerçevesinde OSB'nin sevk ve idaresini yürütmekle görevlidir.

Denetim kurulu
MADDE 9.- Denetim kurulu, müteşebbis heyetin kendi üyeleri arasından seçeceği iki asıl, iki yedek üyeden oluşur. Denetim kurulu üyeleri iki yıl için seçilir.

Denetim kurulu bütçenin sarf ve uygulamasını denetlemek, yılda bir defa genel denetleme raporu ve en az üç ayda bir de ara rapor düzenleyerek müteşebbis heyete sunmakla görevlidir.

Bölge müdürlüğü
MADDE 10.- Bölge müdürlüğü, bölge müdürü ile yeteri kadar idari ve teknik personelden oluşur. Kredi kullanan OSB'lerde, müdürlüğün teşkilat şeması ve kadrosu Bakanlık onayı ile oluşur ve değişir.

Bölge müdürü, müteşebbis heyet tarafından atanır. Bölge müdürü, yönetim kurulunun kararları ve talimatları doğrultusunda OSB'nin sevk ve idaresini yürütmek ve verilen diğer görevleri yapmakla yükümlüdür. Kredi kullanan OSB'lerde bölge müdürünün ve OSB'de görevlendirilecek diğer personelin nitelikleri ve sayıları Bakanlıkça çıkarılacak yönetmelikte düzenlenir.

Temsil ve ilzam
MADDE 11.- OSB'ler; yönetim kurulu başkanı veya başkanvekili tarafından temsil edilir. OSB'yi ilzam edici yazılar yönetim kurulu başkanı veya vekili ile birlikte bir diğer yönetim kurulu üyesi veya yetkilendirilmiş OSB bölge müdürü tarafından imzalanır ve böylece çift imzalı olarak tekemmül eder.

DÖRDÜNCÜ BÖLÜM
Mali Konular
Gelirler
MADDE 12.- OSB'nin gelirleri şunlardır:
a) Müteşebbis heyete katılan kurum ve kuruluşların verdikleri iştirak payları.
b) Arsa tahsisi yapılan veya satışı yapılan ve OSB'de faaliyet gösterecek olan ve gösteren katılımcıların ödedikleri aidatlar ile arsa ve alt yapı katılım payları ve hizmet karşılıkları.
c) OSB alt yapı ve sosyal tesislerinin ihalesi için hazırlanan dosyaların satış bedelleri ile bölge içinde kurulacak olan işletmelerin projelerinin tasdik ve vize bedelleri.
d) Yönetim aidatları.

Page: 5

e) Su, elektrik, doğalgaz, sosyal tesis, arıtma ve benzeri işletme gelirleri ile iştirak gelirleri.
f) Arsa satışından sağlanan gelirler.
g) Bağışlar.
h) Bölge ortak mülklerinin kira ve hizmet gelirleri.
i) Banka faizleri.
j) Gecikme cezaları.
k) İlan ve reklam gelirleri.
l) Diğer gelirler.

Katılma payları
MADDE 13.- OSB'nin oluşumuna katılan kurum ve kuruluşlar Bakanlıkça belirlenecek kuruluş masraflarına katılmayı Bakanlığa taahhüt ederler. Bu taahhüt tüzel kişilik iktisabından itibaren OSB'ye karşı da geçerlidir.

Katılım paylarının ödeme şekil ve şartları kuruluş protokolünde belirlenir. Bu konudaki uyuşmazlıklar asliye hukuk mahkemesince çözümlenir.

Krediler
MADDE 14.- OSB'nin yetkili organları projenin keşif tutarı ile ilgili olarak, Bakanlıktan kredi talep edebilirler. Bu kredinin miktarı gösterilen teminatlarla sınırlıdır. Krediye ait tip sözleşme Bakanlıkça hazırlanır.

Kredi talebi ve bunun geri ödeme usul ve esasları Bakanlıkça çıkarılacak yönetmelikle belirlenir.

Kredinin amacına uygun bir biçimde kullanılmasını Bakanlık denetler. Ayrıca ihtiyaç duyulması halinde başka iç kaynaklar ile dış kaynaklardan kredi kullanabilirler.

Kalkınmada öncelikli yörelerde yapılacak OSB ile ileri teknoloji gerektiren ihtisas OSB'ye arsa kredisi de verilir.

Gelişmiş ve normal yörelerde; ilk defa yapılan OSB'nin alt yapısı için Bakanlıkça belirlenen şartlarda kredi kullandırılır. Yeni proje veya tevsii şeklinde yapılacak müteakip bölümlerde ise faiz oranları Bakanlıkça
belirlenecek miktarlarda artırılarak uygulanır. Kamulaştırma için verilecek kredi miktarı Bakanlıkça belirlenir.

Fert başına GSYİH miktarı 3500 dolar ve aşağıdaki gelir miktarını bulan OSB bulunan yerler, 4325 sayılı Olağanüstü Hal Bölgesinde ve Kalkınmada Öncelikli Yörelerde İstihdam Yaratılması ve Yatırımların Teşvik Edilmesi ile 193 sayılı Gelir Vergisi Kanununda Değişiklik Yapılması Hakkında Kanundan faydalanırlar.

Arsa satışları
MADDE 15.- Arsa satışları müteşebbis heyetin belirleyeceği prensipler içerisinde yönetim kurulunun yetki ve sorumluluğu ile gerçekleştirilir ve Bakanlığa bilgi verilir. Kredi kullanan OSB'lerde kredi borcu ödeninceye kadar Bakanlığın ilgili bankaya bildirdiği bu satışları banka takip eder, tahsis ve satıştan elde edilen meblağ ile kredi taksitlerinin süresinde ödenmesini sağlar.

Arazi satışlarından elde edilen meblağı yönetim kurulunun yatırmadığının tespit edilmesi durumunda; söz konusu tutar peşinat ise satış sözleşmesinin yapıldığı tarihten, taksit ise vade tarihinden yatırılış tarihine kadar geçen süre için banka, Bakanlık lehine 6183 sayılı Amme

Alacaklarının Tahsil Usulü Hakkında Kanunun 51 inci maddesinde belirtilen oranlarda gecikme zammı oranını uygular ve tahsilini takiben fon hesabına alacak kaydeder.

OSB'ce teminat olarak gösterilen ve bu nedenle satışına karar verilen veya katılımcıların borcundan dolayı satışına karar verilen gayri menkullerin icra yoluyla satışı halinde; bölgenin kuruluş protokolünde öngörülen niteliklere sahip alıcılara satış yapılabilir. Satış ilanlarında kuruluş protokolünde yer alan katılımcı niteliklerine de yer verilir.

Yönetim aidatları
MADDE 16.- Yönetim aidatları ve hizmetlerin karşılıkları, müteşebbis heyet tarafından arıtma tesisi işletme masrafları hariç parsel büyüklüğüne göre belirlenir. Arıtma tesisi işletme masraflarına katılım payları ise debi ve
kirletme parametreleri esas alınarak yönetim kurulunca tespit edilir. Yönetim kurulunun yıllık bütçesinde belirtilen, bölgenin alt yapı ve müşterek hizmetlerine ait tüm masraflar önceki yıla ait kesin hesap da dikkate alınarak katılımcılar tarafından karşılanır. Belirtilen hizmetlerden yararlanmadıkları gerekçesi ile yönetim aidatlarının ödenmesinden kaçınılamaz.

Müteşebbis heyetin yönetim aidatı ile ilgili kararları ilam hükmünde olup, ilamların icrasına ilişkin yolla takip edilirler.

Parasal haklar ve özlük hakları
MADDE 17.- Müteşebbis heyet, yönetim kurulu başkan ve üyeleri ile denetim kurulu üyelerinden kamu personeli olanlara toplantı başına huzur hakkı, diğerlerine de huzur hakkı veya aylık ücret ödenebilir. Söz konusu ödemeler müteşebbis heyetin Bakanlıktan aldığı kredi dışında, kendi kaynaklarından yapılır. Huzur hakları ve ödenecek ücretin aylık miktarı her yıl müteşebbis heyet tarafından tespit edilir.

Bölge müdürü ve sair personel 1475 sayılı İş Kanunu hükümlerine göre çalıştırılır. Kredi kullanan OSB'lerde OSB personelinin parasal ve özlük haklarının asgari ve azami miktarları Bakanlık tarafından belirlenir.

BEŞİNCİ BÖLÜM
Çeşitli Hükümler
Arsa tahsisleri
MADDE 18.- Katılımcılara arsa tahsisi, Bakanlık tarafından çıkarılacak yönetmelik hükümlerine göre müteşebbis heyet tarafından yapılır.

Bakanlık gerekli gördüğü takdirde, OSB'de yer tahsis edilecek özel ya da tüzel kişilerin temel vasıfları ile iştigal konularını kuruluş protokolünde belirleyebilir.

Katılımcılara tahsis veya satışı yapılan arsalar hiçbir şekilde tahsis amacı dışında kullanılamaz. Bu arsalar katılımcılar ve mirasçıları tarafından borcun tamamı ödenmeden ve tesis üretime geçmeden satılamaz, devredilemez ve temlik edilemez. Bu husus tapuya şerh edilir. Arsa tahsis ve satışının şirket statüsündeki katılımcılara yapılması halinde, borcu ödenmeden ve tesis üretime geçmeden arsanın satışını ve spekülatif amaçlı işlemlerle mülkiyet hakkının devrini önlemeye yönelik tedbirleri almakla Bakanlık yetkilidir.

Ancak, arsa tahsisi veya satışı yapılan firmanın tasfiyesi halinde, firmanın katılımcı vasfını taşıyan ortağına veya ortaklarına tahsis hakkının devri mümkündür. Bu konudaki işlemlerin muvazaalı olup olmadığını tetkikle ve
sonucuna göre gerekli tedbirleri almakla Bakanlık yetkilidir.

Bu hususstaki yasaklara aykırılığın mahkemece tespiti halinde, arsa kimin tasarrufunda olursa olsun tahsis veya satış tarihindeki bedeli ile geri alınarak bir başka katılımcıya tahsis ve satışı yapılır.

OSB'lerde yer alacak sanayi kuruluşlarının müşterek yararlarına yönelik hizmet vermek üzere, Küçük ve Orta Ölçekli Sanayi Geliştirme ve Destekleme İdaresi Başkanlığı, Sosyal Sigortalar Kurumu, Türk Standartları Enstitüsü, Posta İşletmesi Genel Müdürlüğü, T. Telekomünikasyon A.Ş., Türk Patent Enstitüsü, müteşebbis heyette temsil edilen oda gibi kurum ve kuruluşlara müteşebbis heyet tarafından mülkiyeti OSB'de kalmak üzere arsa tahsis edilebilir.

Ortak yerler
MADDE 19.- OSB alanından katılımcıların ortak yararlanmasına tahsis edilenlerin giderleri, OSB bütçesinden karşılanır.

OSB alanının katılımcılara devir ve temlik edilmemiş kısımları ile OSB imar planı hudutları içindeki yollar ve rekreasyon alanları, OSB tasarrufundadır. Bu husus şüyulandırma aşamasında tapuya işlenir.

OSB'nin, altyapı ya da genel hizmet tesislerinin geçtiği veya geçeceği sanayi parsellerinde ayrıca irtifak ve/veya intifa hakkı tesis edilmez.

Alt yapı tesisleri kurma, kullanma ve işletme hakkı
MADDE 20.- OSB'lerin ihtiyacı olan elektrik, su, kanalizasyon, doğalgaz, arıtma tesisi, yol, haberleşme, spor tesisleri gibi alt yapı ve genel hizmet tesislerini kurma ve işletme, kamu ve özel kuruluşlardan satın alarak dağıtım ve satışını yapma, üretim tesisleri kurma ve işletme hakkı sadece OSB'nin yetki ve sorumluluğundadır. Ancak, atıkların ortak arıtma tesisinin kabul edebileceği standartlara düşürülmesi amacıyla münferiden ön arıtma tesisi yapılması gerekir.

OSB'de yer alan kuruluşlar, alt yapı ihtiyaçlarını OSB'nin tesislerinden karşılamak zorundadır. OSB'nin izni olmaksızın alt yapı ihtiyaçları başka bir yerden karşılanamaz ve bu amaçla münferiden tesis kurulamaz. Bu kuruluşlar kendilerine tahsis edilen alt yapı kullanma hakkını başka kuruluşlara devir ve temlik edemez ve başkalarının istifadesine tahsis edemez.

Bu maddenin uygulanmasına ilişkin diğer hususlar Bakanlıkça çıkarılacak yönetmelikte düzenlenir.

Muafiyet
MADDE 21.- OSB tüzel kişiliği, bu Kanunun uygulanması ile ilgili işlemlerde her türlü vergi, resim ve harçtan muaftır.

Atıksu arıtma tesisi işleten bölgelerden, belediyelerce atıksu bedeli alınmaz.

Sorumluluk
MADDE 22.- Müteşebbis heyet, yönetim ve denetim kurulu üyeleri ve bölge müdürü ile sair personel kendi kusurlarından ileri gelen zararlardan sorumludurlar. Bunlar, para ve para hükmündeki evrak ve senetler ile bilanço, tutanak, rapor, defter ve belgeler üzerinde işledikleri suçlardan dolayı Devlet memurları gibi cezalandırılırlar.

Bakanlığın yetkileri
MADDE 23.- OSB kuruluş protokolü müteşebbis heyetlerce hazırlanır ve Bakanlıkça onaylanır.

Bakanlık gerekli gördüğü hallerde veya şikayet üzerine OSB'lerin her türlü hesap ve işlemlerini denetlemeye ve tedbirler almaya yetkilidir.

Bakanlık kanalıyla kredi kullanan bölgelerin alt yapı, sosyal hizmet tesisleri ve proje ihalelerinde, ihale komisyonu teşkil edilmesi de dahil olmak üzere ihale ile ilgili bütün işlemler, Bakanlıkça belirlenecek usul ve
esaslar dahilinde OSB yönetimi tarafından yürütülür ve sonuçlandırılır. İhalelerin ne şekilde yapılacağı ve komisyonların teşkili ile hak edişlerin düzenlenmesi ve onaylanmasıyla ilgili hususlar çıkarılacak yönetmelikte
düzenlenir.

Page: 8

Söz konusu krediden faydalanmayan OSB'lerde ihale işlemlerinin yürütülmesi ve sonuçlandırılması müteşebbis heyetin yetki ve sorumluluğundadır.

Bu Kanunun geçici 1 inci maddesinin birinci fıkrası gereğini yerine getirmeyen müteşebbis heyetlerin ve yapılacak denetim sonucunda organları bu Kanunla verilen görevleri yapmadığı belirlenen OSB'lerin, kredi talepleri kabul edilmez. Bunlara verilmiş kredilerin geri ödenmesi muaccel olur.

Denetim
MADDE 24.- OSB'nin her türlü hesap ve işlemleri OSB yönetimince yıllık olarak, müteakip yılın ocak ayında ve gerekli görülen hallerde her zaman yeminli mali müşavire inceletilir. Bağımsız denetim yapan yeminli mali
müşavir, düzenlediği denetim raporunu OSB yönetimine ve Bakanlığa eş zamanlı olarak verir.

Genel kurul
MADDE 25.- OSB'de üretime geçtiğini Bakanlıkça istenecek belgelerle tevsik eden ve kuruluş protokolünde tarifi yapılan işletmelerin sayısı bölgede kurulacak işletme sayısının 1/3'üne ulaştığında, kendilerine yer tahsis edilen veya satılan ve böylece katılımcı sıfatını iktisap eden gerçek ve tüzel kişiler, temsil ve ilzama yetkili birer temsilcilerinin kendi aralarında seçecekleri üyeler vasıtasıyla müteşebbis heyette temsil edilirler.

Bu suretle seçilen üyelerin sayısı müteşebbis heyet üye sayısının yarısını geçemez.

Bölgede kurulacak tüm işletmelerin 2/3'ü üretime geçtiklerini belgeledikleri takdirde veya bölgenin kredi borcunun tamamen ödenmesi durumunda, katılımcılar veya temsilcilerinin müteşebbis heyet üyeleri ile birlikte en geç altı ay içinde yapacakları ilk genel kurul toplantısında müteşebbis heyet, yönetim kurulu ve denetim kurulunun görevi sona erer.

Üretime geçmiş katılımcıların salt çoğunluğu müteşebbis heyetin devam etmesini istedikleri takdirde müteşebbis heyet devam eder. Müteşebbis heyetin devam etmesi durumunda müteşebbis heyete katılacak katılımcıların sayısı müteşebbis heyet üye sayısının yarısından bir fazla olur.

Genel kurulun ilk toplantısında, mevcut kuruluş protokolü tüzel kişiliğin ana sözleşmesi olarak değiştirilir, kararlar salt çoğunlukla alınır.

Genel kurulun teşkilini müteakip bu Kanunda aksine bir hüküm bulunmadığı takdirde, OSB'lerin organları ile ilgili olarak Türk Ticaret Kanununun anonim şirketlerin organları ile ilgili hükümleri kıyasen uygulanır.

Genel kurulun oluşumunu müteakip müteşebbis heyet, yönetim kurulu ve denetim kurulu OSB ile ilgili herhangi bir karar alamaz, alacakları karar uygulanmaz.

Genel kurul toplantılarının esas ve usulleri ile yönetim kurulu ve denetim kurulu seçimine ilişkin esas ve usuller yönetmelikle belirlenir.

Özel organize sanayi bölgeleri
MADDE 26.- Bu Kanundaki usullere göre belirlenen yerlerde, özel hukuk tüzel kişilerince ve gerçek kişilerce de OSB kurulabilir. Ancak, özel OSB kuracak olanlar kamulaştırma yapamazlar. OSB'nin kuruluş talebi, kurulacağı ilin valiliğinin uygun görüşü ile Bakanlığa iletilir. OSB'nin yer seçimi Bakanlığa yapılan talep üzerine, 4 üncü maddedeki usule göre yapılır. Arazi temini, OSB'nin planlanması, projelendirilmesi, alt yapı inşaatı ile
ilgili harcamalar bölgeyi kuracak gerçek ve tüzel kişilerce karşılanır. OSB ile ilgili plan ve projeler bu konudaki yetkili kurum ve kuruluşlar yanında Bakanlığın uygun görüşü ve onayına tabidir.

Page: 9

OSB'deki arazi, parseller halinde veya işletme binaları da yapılmak suretiyle satılabilir veya kiraya verilebilir.

Üst kuruluş, yönetmelikler ve düzenlemeler
MADDE 27.- OSB'lerin kendi aralarında yardımlaşmaları ve ortak sorunlarını çözüme kavuşturmalarını sağlamak üzere oluşturulacak OSB üst kuruluşlarının görev ve çalışma şekilleri çıkarılacak yönetmelikte belirlenir.

Bu Kanunda öngörülen yönetmelikler, "OSB Uygulama Yönetmeliği" adı ile tek bir yönetmelik olarak, Kanunun yayımı tarihinden itibaren bir yıl içerisinde çıkarılır. Bakanlık bu Kanunun uygulanmasıyla ilgili olarak mevzuat
çerçevesinde gerekli tedbirleri almaya ve düzenlemeleri yapmaya yetkilidir.

ALTINCI BÖLÜM
Geçici Hükümler
GEÇİCİ MADDE 1.- Bu Kanunun yürürlüğe girdiği tarihten önce Kanunun amacına uygun biçimde oluşan OSB'ler, Kanunun yayımı tarihinden itibaren bir yıl içinde durumlarını bu Kanuna uygun hale getirirler.

Bu Kanunun yayımı tarihinden önce kurulmuş olan OSB'lerin organları, bu Kanuna intibak süresi içinde işlevlerini sürdürürler. Bu organların almış olduğu kararlar, imzaladıkları mali, idari ve iltizami akit ve sözleşmeler, intibak işleminin tamamlanmasından sonra da geçerliliğini aynen korur. OSB'lerde çalışmakta olanların özlük hakları mahfuz tutulur.

GEÇİCİ MADDE 2.- Bu Kanunun yürürlüğe girmesinden önce 5590 sayılı Ticaret ve Sanayi Odaları, Ticaret Odaları, Sanayi Odaları, Deniz Ticaret Odaları, Ticaret Borsaları ve Türkiye Ticaret, Sanayi, Deniz Ticaret Odaları ve Ticaret Borsaları Birliği Kanununun 5 inci maddesinin (r) bendinin (5) numaralı alt bendine göre kurulup yönetilmekte olan OSB'ler, bu Kanunda adı geçen OSB'lerden sayılır. Bu tür OSB'lerde, müteşebbis heyet görevlerini oda meclisi, yönetim kurulu görevlerini yürürlükteki OSB mevzuatı uyarınca oluşturulmuş kurullar, denetim kurulu görevlerini ise oda meclis bütçe komisyonu yerine getirebilir.

GEÇİCİ MADDE 3.- Bu Kanunun yürürlüğe girmesinden önce kurulan OSB'lerin müteşebbis heyetlerine, 4 üncü maddenin yedinci fıkrasında sayılanlardan başka kurum ve kuruluşlar iştirak etmişler ise bunların hak ve mükellefiyetleri aynen devam eder veya isterlerse, iştirak paylarının iade edilmesi şartıyla ayrılabilirler.

GEÇİCİ MADDE 4.- Bu Kanunun yürürlüğe girmesinden önce başlatılan kamulaştırma işlemleri, ilgili kurumlarca sonuçlandırılır.

GEÇİCİ MADDE 5.- Bu Kanunun yürürlüğe girmesinden önce kurulmuş olan küçük sanayi sitelerinden oluşan organize küçük sanayi bölgelerindeki Kooperatifler Birliği talepleri halinde müteşebbis heyete dahil edilirler.
Küçük sanayi sitelerinden oluşan organize küçük sanayi bölgelerinde her kooperatif bir katılımcı sayılır. Kooperatifler feshedildiğinde her bir site aralarından seçtiği bir kişi ile genel kurulda temsil edilir.

GEÇİCİ MADDE 6.- Kanunun yürürlüğe girmesinden önce OSB kurmak amacı ile müteşebbis heyeti meydana getiren kurum ve kuruluşlar adına iktisap edilmiş bulunan tüm arsalar, araziler ve tüm gayrimenkuller ile bilahare bunlar üzerinde müteşebbis heyeti meydana getiren kurum ve kuruluşlar adına inşa edilmiş olan tüm binalar ve ortak tesisler OSB tüzel kişiliği lehine tapuda tashihen tescil edilir.

Page: 10

OSB müteşebbis heyetinin uhdesinde bulunan OSB'ye ait tüm menkul kıymetler ve iştirak hisseleri bedelsiz olarak OSB tüzel kişiliğine devredilir. Arsa Ofisi Genel Müdürlüğünden satın alınmış olan arsa ve arazilerde Arsa Ofisi Kanununun 11 inci maddesine göre tapuya işlenmiş olan şerhler silinir.

GEÇİCİ MADDE 7.- 4342 sayılı Mera Kanununun yürürlüğe girdiği tarihe kadar mera olarak nitelendirilen alanlara yapılmış OSB'ler; Sanayi ve Ticaret Bakanlığı tarafından onaylanmış ve yatırım programına alınmış olmaları şartıyla mera vasfını kaybetmiş olur. Bu alanlar **4342 sayılı Mera Kanununun** hükümlerine tabi değildirler. İl mera komisyonlarının bu alanlarla ilgili daha önce aldıkları kararlar hükümsüzdür.

Yürürlük
MADDE 28.- Bu Kanunun **14** üncü maddesinin son fıkrası **31.12.2001** tarihinde, diğer maddeleri yayımı tarihinde yürürlüğe girer.

Yürütme
MADDE 29.- Bu Kanun hükümlerini Bakanlar Kurulu yürütür. **14/4/2000**